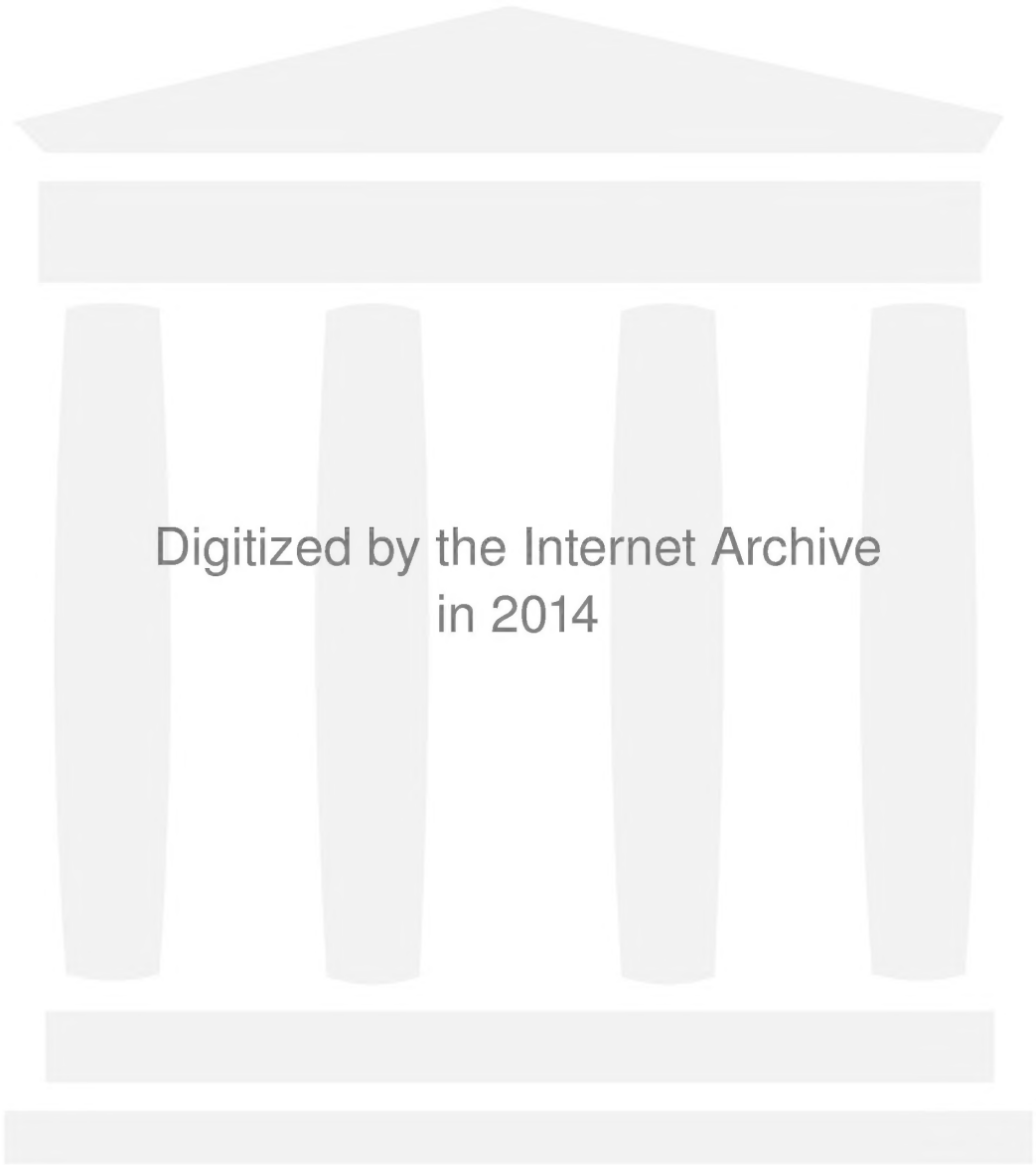
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ESS WEEK
May 2

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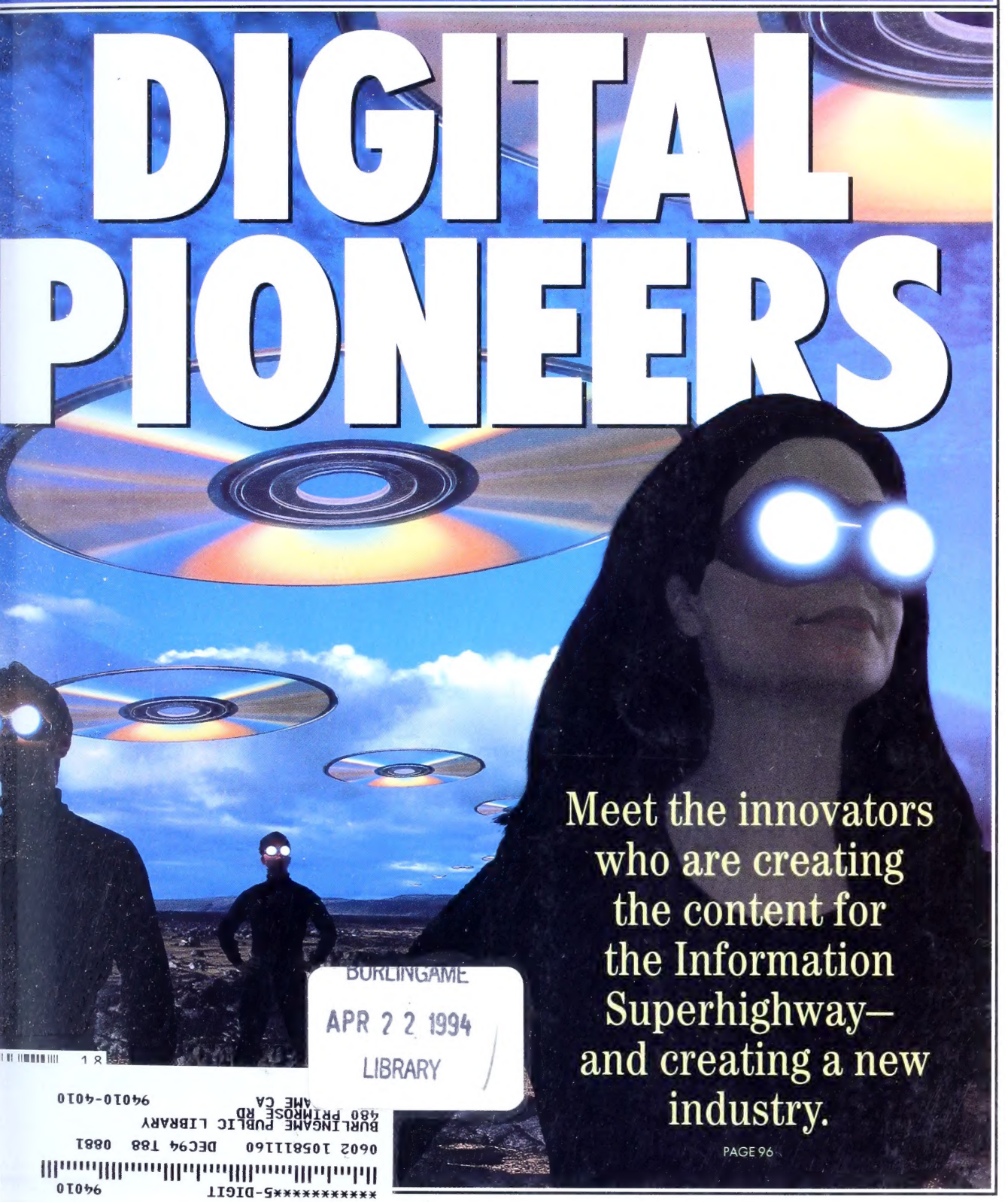
FED REALLY UP TO BOARDS OUTSIDE DIRECTORS SOUTH AFRICA SAVE THE ECONOMY?

BusinessWeek

2, 1994 A McGRAW-HILL PUBLICATION $2.75

DIGITAL PIONEERS



Meet the innovators who are creating the content for the Information Superhighway—and creating a new industry.

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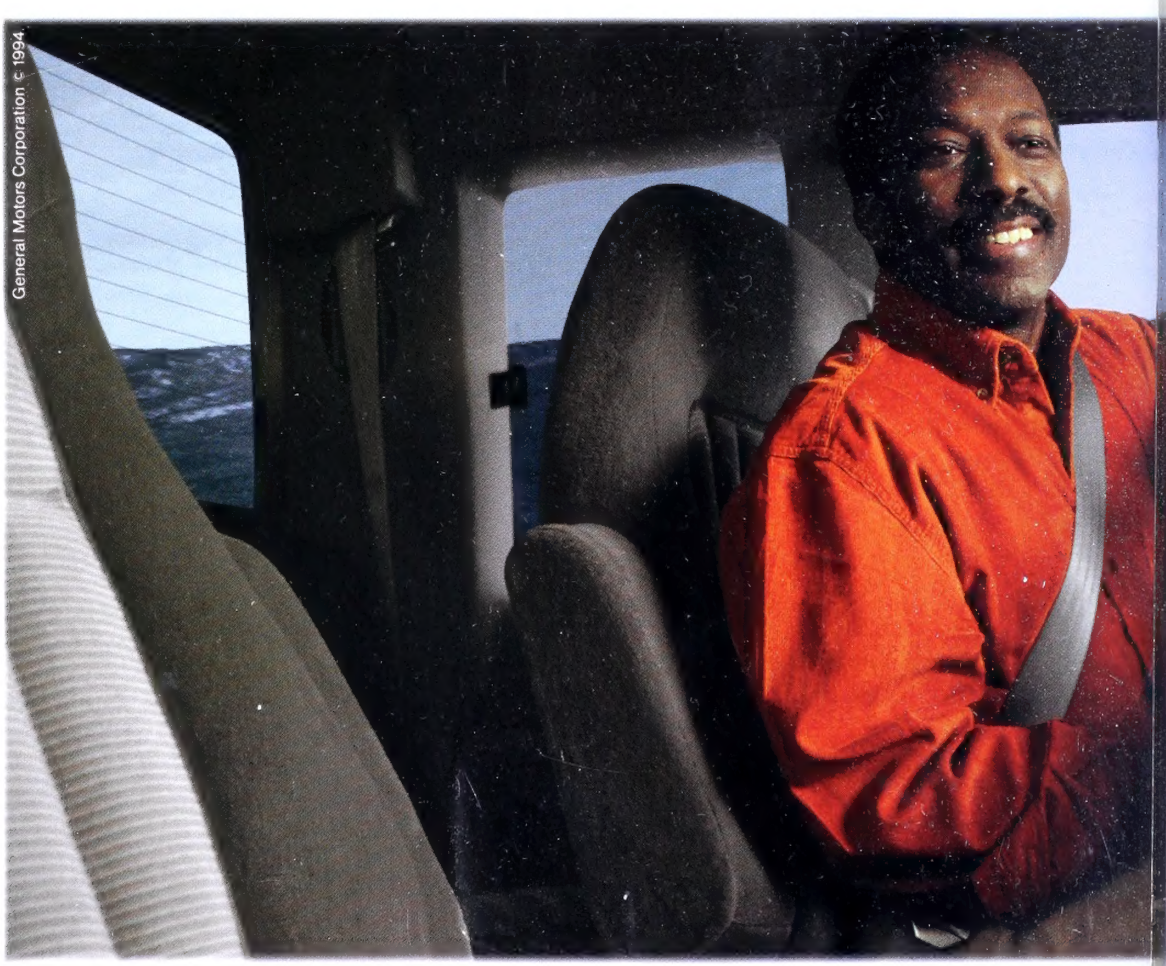
"THERE ISN'T A PERSO

TO DRIVE A GM VEHIC



There are at least four things in life that are truly indispensable: food, air, shelter, love. Bu
ple can always find a way to muddle through without General Motors products. This i
GMC Truck Division head Roy Roberts explains what satisfying today's customer is about

N THIS PLANET WHO NEEDS
N ORDER TO LIVE."

: "Build something so right for your customers, they can't imagine living without it." This
es us as a pretty good definition. After all, General Motors cars and trucks, no matter how
we labor over their creation, have something the "four indispensables" don't. Competition.

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Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

TALK SHOW

Any system is subject to someone getting around it.

—Michael Carpenter, CEO of Kidder Peabody, regarding an alleged fake-trading scheme that socks parent General Electric with a $350 million pre-tax charge

KIBITZERS

OH, *THAT* 80,000 SHARES

SPURNED: *Westinghouse's Jordan*

Earlier this year, Westinghouse Electric Chief Executive Michael Jordan trekked to the West Coast, where he enlisted the support of the California Public Employees' Retirement System (CalPERS) for a new incentive pay plan for executives. But on Apr. 19, the activist pension fund's board reversed field and joined a shareholder revolt against the pay plan.

Why the change? CalPERS, owner of 2 million Westinghouse shares, says it was kept ignorant about options on 80,000 shares the plan would provide to Robert Watson, ex-head of Westinghouse's financial-services unit—even though he no longer works for the company. Watson already has earned more than $10 million for 18 months of work dismantling the troubled finance arm. "We weren't told about the Watson package," says Richard Koppes, CalPERS general counsel. "All that came up after we announced our support for it."

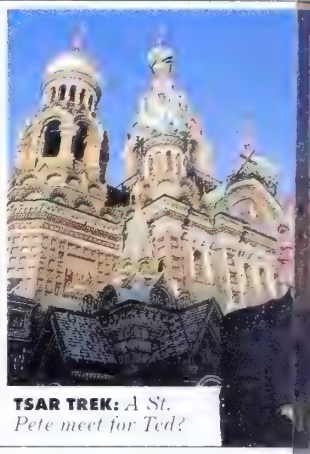
Also upset are the New York City Teachers' Retirement System, which started the shareholder uprising, and the Florida state pension fund. They probably won't prevail, but could embarrass the company. Watson couldn't be reached. Westinghouse's only reply is that the plan serves shareholder interest by "tying executive compensation to performance." *John A. Byrne*

NEW WORLD ORDER

THAT MAY BE A NYET-NYET, MR. TURNER

Ted Turner is holding his annual meeting this year in St. Petersburg. The one in Russia. The July 26 Turner Broadcasting System gathering may be a bit out of the way. But Ted figures the venue makes sense. It's the site of the next (July 23-Aug. 7) Goodwill Games, the sports meet Turner launched in 1986 to help mend relations after Russia and the U. S. boycotted each other's Olympics.

TBS is the first American company to meet in the former Soviet Union—and this is the first time for TBS abroad. Only a few U. S. companies, usually with big foreign sales, have met offshore, such as Data-



TSAR TREK: *A St. Pete meet for Ted?*

point two years ago in Pa

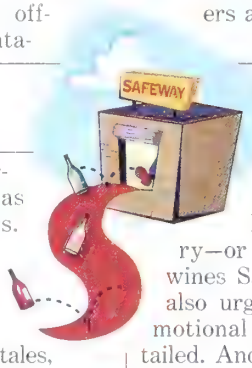
However diplomatic Tu
er's choice seems, it isn't
versally applauded. Thor
Flanagan, head of the
vestor's Rights Assn., gr
ing about the inconvenie
asks: "How many shareh
ers are in Russia?"
David Grei

CALIFORNIA WHINE

SUPERMARKETS AND SOUR GRAPES

In larger Golden State supermarkets, folks pick from 30 or 40 chardonnays to complement their mesquite-grilled squab. Grocery-store sales, allowed in California and 32 other states, are a key outlet for the state's $7 billion wine industry.

Now, a leaked confidential memo from Safeway, the nation's No. 3 supermarket chain, has spooked vintners. "The majority of our stores have the appearance of a liquor store," complains John Cartales, Safeway's new senior vice-president for 260 Northern California stores, in the Mar.



18 memo.
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brands are
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the wareho
lists in his ter
ry—or about 10% of
wines Safeway carries.
also urged that wine
motional displays be
tailed. And Cartales sugg
ed still more paring back
slow-selling wines may co
Why? While wine has h
margins (20% to 30%, vs.
overall supermarket marg
some wines don't move w

Vintners, who had
considered Safeway w
friendly, were stunned.
wine buffs lit up Safew
switchboard. A comp
spokesperson quickly back
aled, saying Cartales reg
ted any antiwine impres
the memo left and insi
stores would maintain a g
wine selection.

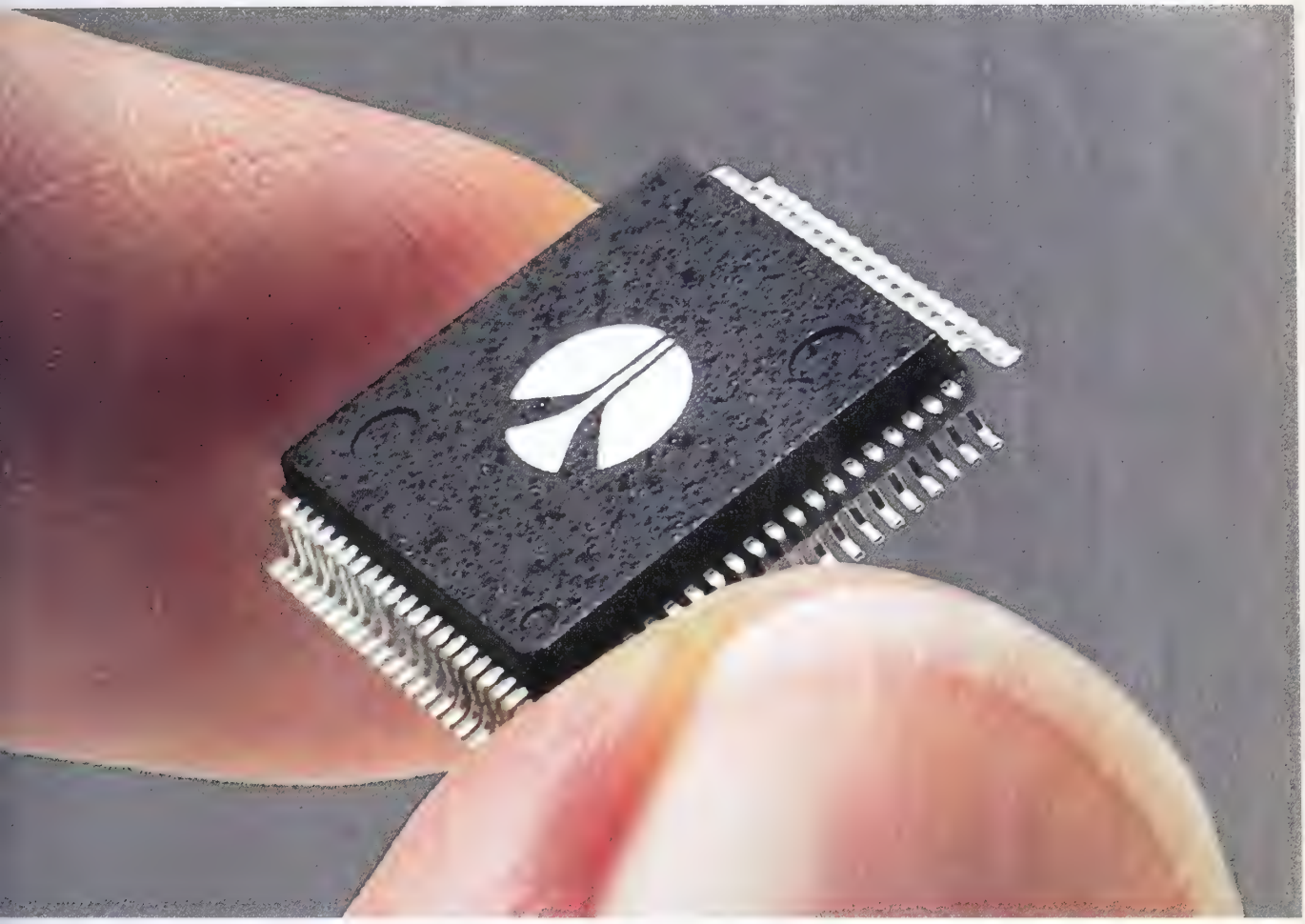
But the move could ba
small wineries dependen
Safeway sales. And vint
worry that other chains
follow suit if Safeway's n
leads to short-term p
gains. *Joan O'C. Ham*

REALITY CHECK

THE CHICAGO MERC SAYS it is closing in on its archrival, the Chicago Board of Trade. The CBOT is the world's biggest commodity futures exchange, with a first-quarter trading volume of 58 million contracts. But the Chicago Mercantile Exchange, which already bills itself as the "world's largest marketplace" because it has more trading-floor space, now boasts a boost in volume. By redoing the way it counts, the Merc reported 54.7 million contracts in the first quarter.

IN REALITY, the Merc's new volume is inflated no less than 9%. To claim bragging rights, it now includes expiring options, pork-belly deliveries, and even trades made at a related exchange in Singapore. To the CBOT, this creates an illusion of greater market liquidity. Regulators at the Commodity Futures Trading Commission say the Merc's tallying method runs counter to long-standing rules. And the Futures Industry Assn., the industry's main trade group, is subtracting the extra Merc volume from its official reports. Result: just 50.2 million first-quarter contracts for the Merc. *Greg Burns*

Inside almost every fax machine is a little piece of Rockwell.



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It's a way of doing business that has put Rockwell in a leadership position in each of the diverse markets we serve. By anticipating the needs of customers worldwide.

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Up Front

IRS FOLLIES

AT LEAST HE FILED BY THE 15TH

With the memory of Apr. 15 still burning, ponder the tale of Daniel Naple, who has gotten a lot out of two things most of us wouldn't relish: doing time and filing tax returns. While serving a grand theft sentence at a Belle Glade (Fla.) prison, Naple generated a tidy sum in illicit tax refunds, according to an Apr. 8 indictment. Naple used the names and Social Security numbers of hundreds of fellow inmates to file fake returns in 1989 and 1990, snaring nearly $75,000 on claims of $890,000 until the feds got wise, the indictment says.

Prosecutors say he typed up W-2 and 1040 forms—it's unclear how he got them—at the prison's law library, then smuggled them outside to pals, who mailed in returns and picked up refund checks sent to mail drops. Two other men, Philip Nelson and Robert Kirsch, were also indicted and pleaded not guilty. Naple, who had been released from Belle Glade in 1990, remains a fugitive. *Gail DeGeorge*

BLOOM GLOOM

A ROSE IS A ROSE IS A TRADE BROUHAHA

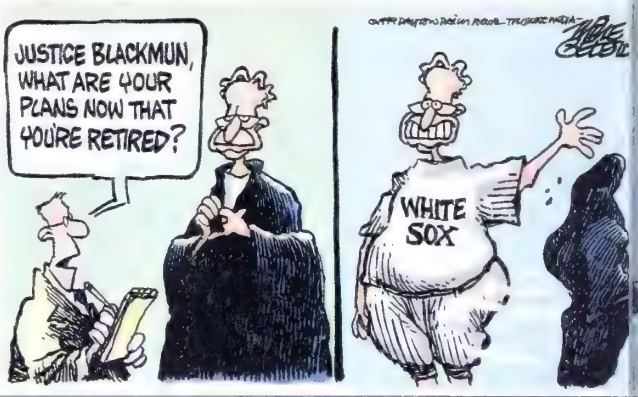
It's the war of the roses. Domestic rose growers, their market share steadily eroded over the past two decades, say foreign imports are dumped below cost in the U. S.—so they're howling for tariff protection. Imported roses, mostly from Colombia and Ecuador, claim 55.6% of the U. S. market. And that has allegedly put some American producers out of business: There were 213 domestic rose growers at yearend 1993, down 5% from 1992.

To American growers, imported roses are inferior: They aren't as fresh, too often don't bloom, and rarely last more than a couple of days, says Tim Haley, president of the Floral Trade Council, the U. S. growers' trade group. The growers fear that, as a result, all roses will lose their storied cachet.

Importers, though, say the charges are just a mask for gross protectionism. "They've earned their place in the U. S. market through innovation and marketing," says Patrick Macrory, an attorney representing the Colombian Flower Council. Maybe, but the U. S. International Trade Commission recently unanimously agreed that the industry was being damaged. A final decision on whether to impose duties, and how much, is expected in early 1995. □

THORNY ISSUE: *Coffee and coca aren't all they grow in Colombia*

DRAWN AND QUARTERED



ON THE FUND FRONT

SCHWAB GETS MUTUALLY EXCLUSIVE

In your face, Fidelity. On May 9, giant discount broker Charles Schwab will expand OneSource, its successful no-broker-fee mutual-fund service, to institutional customers such as 401(K) plans. In a display of muscle aimed at grabbing the prized pension dollar, OneSource has bagged exclusive no-fee broker's rights to offer some hot funds. That's 34 of its 78 funds enlisted for the institutional market so far. Schwab execs pointedly note these funds—including Alger, SoGen, and Vista—aren't available from its main competitor, Fidelity Funds Network, the mutual-fund brokerage arm of the Fidelity fund family. Plus, many institutional OneSource funds are dropping their sales loads for OneSource clients.

Brokerage firms have a [illegible] on their proprietary funds, [illegible] it's unusual to get exclusiv[illegible] for others' funds. Schw[illegible] though, is eager to prot[illegible] OneSource, which handles [illegible] billion in assets, almost tw[illegible] the size of Fidelity's ni[illegible] month-old no-fee progr[illegible] Schwab launched OneSou[illegible] in July, 1992, which allo[illegible] retail clients to inves[illegible] 200 funds with no [illegible] ker's transaction fe[illegible] The funds, hun[illegible] for fresh investme[illegible] pay Schwab for [illegible] business.

Fund officials [illegible] ing only with [illegible] Source say the[illegible] not married [illegible] Schwab. As l[illegible] as they m[illegible] OneSource th[illegible] only no-fee [illegible] gram, they'll [illegible] a break on [illegible] fees they [illegible] Schwab. But Fidelity po[illegible] poohs the idea of exclusiv[illegible] "Most funds want as wide [illegible] tribution as possible," s[illegible] Donna Morris, an exec at [illegible] delity. *Jeffrey M. Lader[illegible]*

THE BIG PICTURE

TESTING...TESTING

More and more companies are testing their workers for drugs. Although the spread of testing appears to have slowed in the past year, look for it to grow again. Reason: New federal regulations require most mass transit workers to be tested.

DATA: AMERICAN MANAGEMENT ASSN

FOOTNOTES

Tax returns filed as of Apr. 9, 1993: **70.1 million**. As of Apr. 8, 1994: **68.1 million**. Average refund, 1993: **$972**. 1994: **$1,02[illegible]**

First You Gave Us A Desk.

Now We Want To R

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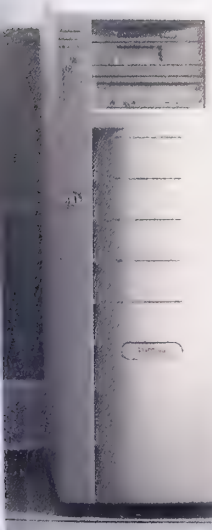

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Readers Report

TEENS: BUTT-HEADS OR JUST NOT BOOMERS?

Regarding your article "Teens" (Cover Story, Apr. 11), they are an example of what's wrong with America. They are the most incarcerated and most stupid (test scores) generation in our history. It's time we stopped allowing teens to be trendsetters and returned to more healthy values.

James B. Mathers
Chicago

I realize that my generation has problems, but the problems that young people face today have changed. Teenage pregnancy continues to be a problem, but I also have to worry about AIDS, the future job market, and if I will even get a chance to prove myself before I'm condemned not for my color or background, but for being born into a group of people that the media and general public have deemed worthless.

Sara Danzinger
Alma, Wis.

Your article gave the impression that all teenagers do and like certain things. I would like your readers to find out about the other types of teenagers—the ones like myself who through hard work and dedication will become CEOs.

I am 16 and am in the process of building my own software corporation. I read book upon book about the structure and revitalization of corporations. I read several business magazines, such as BUSINESS WEEK. My hero is Bill Gates of Microsoft. I do not believe in foolishness or wasting time. Time is money.

Jamie S. Liljenquist
Cooperstown, N. D.

I was glad to see that there is a young, smart, strong generation of teenagers out there. I was beginning to wonder who was going to support us in our old age. It's good that these kids like to consume as it will make them work harder, thereby creating more Social Security revenue. So remember, fellow Boomers, be nice to these kids, teach them well, and instill in them a strong work ethic. We're really going to ne[ed] them come 2010.

Richard J. M[oss]
Richard J. Moss & Associa[tes]
Santa Fe, N[M]

ARE SIN TAXES A BLESSING OR BIG BROTHERISM?

Christopher Farrell's article "This[sin] tax is win-win" (Top of the Ne[ws], Apr. 11) is right on target when poin[ting] out that decreased smoking resul[ts] from a $1 to $2 per pack cigarette [tax] increase will save lives, raise reven[ue] and improve the nation's health. In a[dd]tion, passage of a tax on other toba[cco] products, Senator Daniel P. Moynih[an's] huge ammunition tax proposal, an[d a] large tax on all alcoholic beverages c[ould] finance whatever health-care-reform [bill] is enacted as long as members of C[on]gress are willing to forgo big campa[ign] contributions from these groups.

Edward L. Ko[ch]
Highland Park, I[ll.]

Social engineering by taxation is [not] some Americans in the late 18th [cen]tury dropped tea into Boston Harbo[r.]

If you're willing to support this so[rt of] stuff, let me drop this one on you. [The] game of golf is a waste of time, ene[rgy], land use, and causes skin cancer [and] overexposure to the sun. I am goin[g to] run for public office on the premis[e of] wiping out or limiting golf to the ge[ner]al public by taxing the golf nuts, $[5] per nine holes. Will you back my c[am]paign for this the same way you [are] backing the "sin tax"?

George K. Strodtb[eck]
Vincennes, [Ind.]

TOO MANY PEOPLE IS NOT THE PROBLEM

In reference to "The baby boom [has] has to end" (Environment, Apr. 1[1]), I am so tired of hearing how there [are] just too many people for our poor [old] burdened planet. While we Ameri[cans] tear down what is left of the forest[s] to build single-family homes on half-[acre] lots, we blame developing nations [for] the world's environmental problems[.]

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Readers Report

CORRECTIONS & CLARIFICATIONS

a table of the hottest initial public erings in the past 12 months ranked stock appreciation ("Beware the IPO rket," Cover Story, Apr. 4), some mpanies were out of order. Micro-p Technology should have been first, ysician Corp. of America should ve been fourth, and Styles on Video ould have been fifth.

table with "Finally, ARM funds may t a leg up" (Personal Business, Mar.) showed the wrong funds with the ghest three-year rank for adjustable-e-mortgage mutual funds. Here are e top five as of Apr. 8, 1994.

D	TOTAL RETURN (3 year average annualized)
per Adjustable Rate U.S. Govt.	6.94%
erated ARMs Institutional	6.93%
rim Adjustable U.S. Govt. Securities I	4.96%
stone America Cap. Pres. & Inc. A	4.90%
rland Express Variable Rate Govt. A	4.69%

DATA: MORNINGSTAR INC.

ad of treating our neighbors as re-nsible adults capable of making intel-ent decisions, we want to manage m like a herd of sheep.

Robert M. Morici
Atco, N. J.

all 5.5 billion people alive in 1992 ved four to a house, it would require 5 billion homes to shelter them. If h of those homes were built on a ndard ¼-acre subdivision lot, the en- population of the earth could be sed on 171 million acres. The state of as alone contains 171 million acres. rest of the earth would then be ilable for nongrowth crusaders.

William M. Staley
Staley Associates
Nashville

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REINVENTING THE FUTURE: CONVERSATIONS WITH THE WORLD'S LEADING SCIENTISTS
By Thomas A. Bass
Addison-Wesley • 249pp • $24.95

THE MOTHER OF INVENTION? FREEDOM

Science geniuses can be prickly sorts. So Thomas A. Bass discovered when he talked with the pioneering British drug designer James W. Black for his fascinating new book, *Reinventing the Future: Conversations With the World's Leading Scientists*. To start, Bass asked Black where he was born. "Are you trying to analyze me?" Black demanded. "Am I on your couch to be dissected and poked? This sort of public stripping before we start, getting me on the couch and tearing off my protective gear—can you see why I'm allergic to it?"

Fortunately for Bass, the other 10 scientists he interviewed for his book weren't so pugnacious. But the scientists—in fields as diverse as chaos theory and genetics—all emerge as offbeat and strong-willed. Luc Montagnier, co-discoverer of the AIDS virus, happily confirms that he has a lot of enemies. Geologist Farouk El-Baz tells how he incurred the wrath of the Nasser regime in Egypt when he refused an undesirable assignment to teach chemistry at a technical school in the Suez region. Thomas Adeoye Lambo, a British-trained psychiatrist, dared to hire traditional healers—"witch doctors"—to work beside the psychiatric staff in his native Nigeria, with apparent success. Says Lambo, speaking for many of his peers: "I'm restless."

To be sure, it's no surprise that scientists like to go their own ways. What *Reinventing the Future* makes clear is that their independence is deeply entwined with their creativity. Take away one, and the other dies. That's a message to be heeded by directors of government, academic, and corporate laboratories who have lately been intent on channeling scientists' efforts into what they see as more productive paths.

Happily, though, *Reinventing the Future* is much more than a how-to work for research directors. In their own words, these scientists talk about their lives and their eye-opening research. For instance, Sarah Hrdy, an American anthropologist, went to India to study the mating habits of hanuman monkeys, considered sacred by many Indians. There she developed a controversial but now accepted theory of why female primates mate with many males. The evolutionary logic: They intentionally confuse paternity so that the males will refrain from killing the females' offspring, since they might be the father.

Interviewee Richard Dawkins, author of *The Selfish Gene*, an influential book published in 1976 that portrayed humans as robot vehicles controlled by their genes, is a self-described dabbler. He once devised a mathematical model for how chickens peck and wrote his own word-processing program for his Apple II computer—software no one else has ever used. Today, Dawkins imagines that artificial intelligence could someday develop to the point where large organizations will be taken over by machine intelligence. "Humans," he says, apparently seriously, "will then sink into the background as functionaries or slaves."

Of all the scientists featured here, El-Baz can lay claim to the most varied career. After defying the Nasser regime, he emigrated to the U. S., where he eventually ended up supervising the collecting of moon rocks by Apollo astronauts. He later moved on to Boston University, where he has taken up the cause of "nondestructive archeology" in his native Egypt. The idea is to use remote sensing technology to explore ancient mummies, wall paintings, and solar boats without removing them from the tombs. Says El-Baz: "The era of archeology as high-class grave-robbing is over."

Bass, a veteran science journalist, clearly has a knack for getting people to talk, and he has been in touch with some of his interviewees off and on for years. One, chaos theorist Norman Packard, was a protagonist in Bass's 1985 book, *The Eudaemonic Pie*, which chronicled an attempt by Packard and colleague Doyne Farmer to beat Las Vegas by using a toe-operated microcomputer to track where a roulette wheel's ball was stopping and calculate where it was likely to stop next.

By his own account, Bass has edited these interviews to eliminate jargon and minimize his own appearance. Black's tirade, for example, is mentioned in the preface but left out of the interview itself. In addition, Bass took the unusual step of showing the pieces to his subjects before they were printed. Far from trying to bowdlerize their remarks, he says, the scientists tended to strengthen and amplify their arguments.

Readers interested in research and development strategies would do well to turn to the interview with Black. Prickly though he may be, he is also a seminal thinker with strong opinions about scientific freedom. He has invented not one but two billion-dollar drugs—first beta blockers, which prevent heart attacks and reduce high blood pressure, and then the active ingredient for the anti-ulcer drug Tagamet. In both cases, his employer gave him free rein. "Research has to be constrained and channeled," says Black. "But the more you try to make it efficient, the more inefficient it will become. You'll kill the goose."

Etienne-Emile Baulieu, inventor of the RU 486 abortion pill, laments in his interview that to the world at large, the scientific enterprise has become faceless. "Nobody cares about the lives of scientists." Truth be told, most scientists are just drones like the rest of us. But the precious few are true explorers. Thomas Bass has brought 11 of them to life.

BY PETER C

Peter Coy covers technology for BUSINESS WEEK.

This fascinating look at the lives of 11 scientists shows that creativity is closely linked to independence

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June 7	Oslo, Norway	August 4	Chicago, IL
June 15	Frankfurt, Germany	August 11	San Francisco, CA
June 21	Buffalo, NY	August 16	Paramus, NJ
June 23	New York City #2	August 18	Princeton, NJ
June 28	Philadelphia, PA	August 31	New York City #3
June 30	Rochester, NY	September 13	Atlanta, GA
July 13	London, England	September 21	Los Angeles, CA
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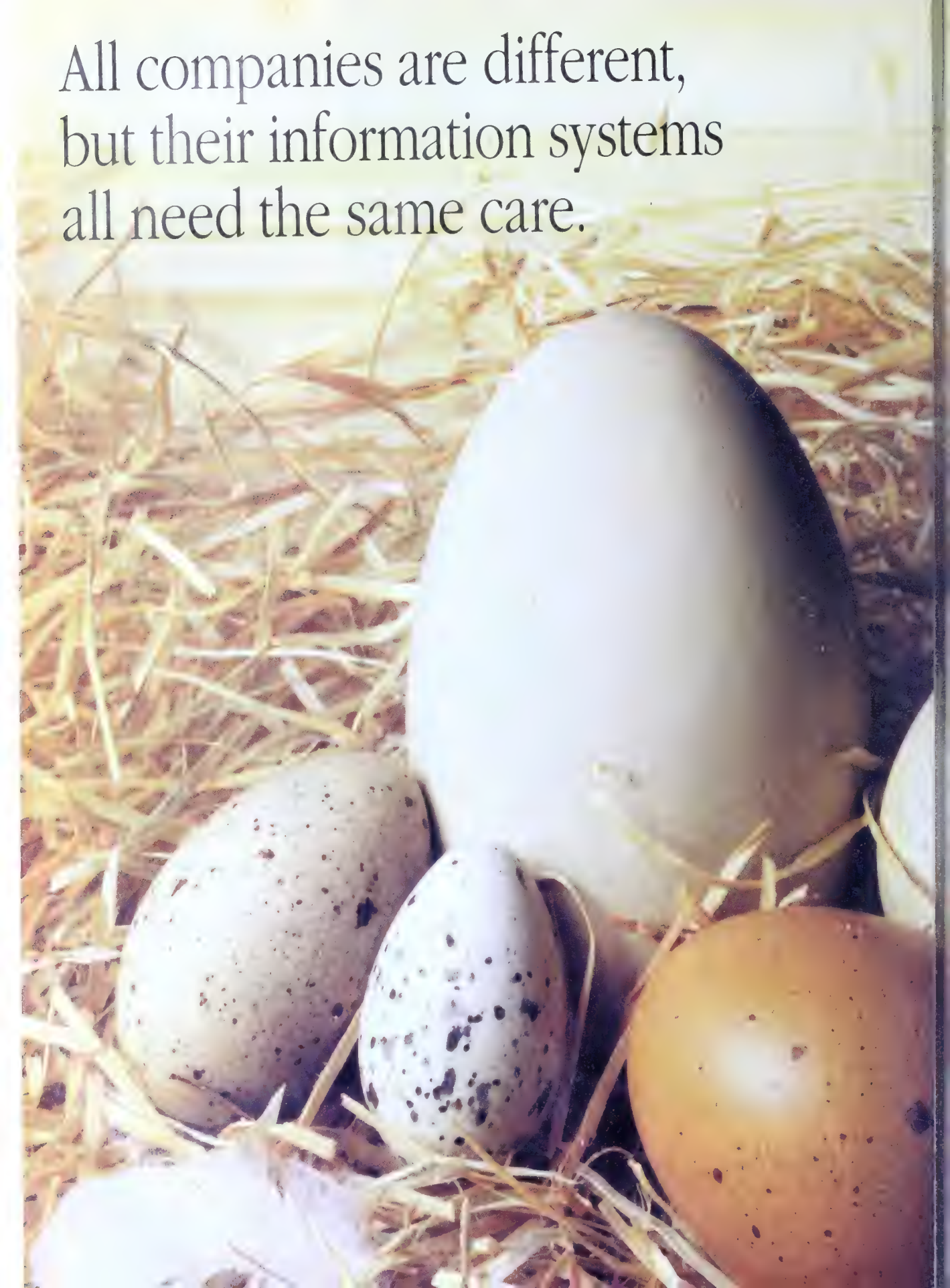

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WHY THE THIRD WORLD SHOULD STRESS THE THREE R's

BY GARY S. BECKER

Unless governments of developing countries redirect spending—and enact innovative voucher plans—to guarantee schooling and health care, there can be no economic progress

GARY S. BECKER, THE 1992 NOBEL LAUREATE, TEACHES AT THE UNIVERSITY OF CHICAGO AND IS A FELLOW OF THE HOOVER INSTITUTION

The rebellion in the poverty-stricken Mexican state of Chiapas has dramatized the inequality in living standards in a country trying to promote rapid economic development. Third World nations that neglect the education, training, and health of the poor perpetuate divisions that may tear apart their social fabric.

At a recent education conference in Brazil, I argued that economic development cannot be sustained when a nation neglects elementary education for a sizable part of its population. Education lets young persons from poor backgrounds acquire the skills to rise in the world, and it reduces the tendency for inequalities in wealth to be perpetuated from one generation to the next. The example of the so-called Asian tigers—Hong Kong, Korea, Singapore, and Taiwan—is instructive: Early in their development, they largely eliminated illiteracy and raised the schooling of the bottom stratum to decent levels.

According to statistics compiled by Robert J. Barro of Harvard University, more than two-thirds of Brazilians over the age of 25 have less than four years of schooling, and a further one-fourth have none at all. The situation in Mexico is almost as bad. Education of the poor in both nations has greatly improved over the past two decades, yet even now fewer than one-third of teenage Brazilians are in school. The slums scattered throughout Rio de Janiero are filled with children who spend their time not in school but on the streets, terrorizing residents and visitors with burglaries and robberies.

The social problems from unequal education are often compounded by racial differences: In Brazil, Mexico, and many other nations, wealth, education, and occupation are polarized along racial lines. The poor in Mexico are mainly Indians, while in Brazil they are primarily descendants of slaves brought from Africa.

SQUARE MEALS. Children from homes with poor, illiterate parents need schooling that addresses their special needs. My wife and I spent a day as the guests of Governor Leonel Brizola of the state of Rio de Janiero at one of several hundred schools in the state that were created during the past decade for poor children. Students in these schools get three meals and almost 10 hours of instruction and recreational activity a day, and they do their preparation in the classroom rather than at home. But since such schools are expensive to build—$1 million per school—as well as to operate, they are not the solution for poor children.

A better way to help poor families in the Third World (as well as elsewhere) would be through a tuition voucher system. Low-income parents would receive vouchers that help pay the tuition at any approved school that accepts their children. Participating schools could be required to provide nutritious meals and health checkups. Such vouchers would stimulate competition among public and private schools to improve the education and health of children who most need to be helped. Middle- and upper-income families have less need for tuition vouchers, for they often manage wherever they are to get decent schooling for their children.

Poor mothers and fathers usually want better life for their children than they have had themselves, and many of them would choose schools wisely. Even some of those who care very much about their families, however, often force children to leave school early so that they can help contribute toward the meager household resources, even when this violates child-labor and minimum-school laws.

WASTE NOT. One way to provide incentives for poor parents to look out for their children's interests is to give them a bonus that offsets the income loss from keeping children out of the labor force. The bonus could be large when the children attend school regularly, but it could even rise when the children receive good grades.

Apologists for the status quo claim that poor countries do not have the resources to raise the education of all their citizens to decent levels, and they believe international organizations such as the World Bank should finance the education of their poor. But governments in these countries usually spend a quarter or more of gross domestic product on financing deficits in inefficient state enterprises, on excessively expensive universities, and in many other wasteful ways.

The real obstacle to greater government spending by Third World countries on basic education, combating crime, and other important public activities is not their limited resources but the diversion of these governments from what should be their main priorities. They are too busy doing things that either should not be done at all—or that should be left to the private sector.

Countries such as Brazil and Mexico have enormous human energy and economic potential. But they will further delay their entry into the First World if they continue to pay insufficient attention to the schooling and health of their poor.

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BY GENE KORETZ

CAPITAL SPENDING: THE BEST IS YET TO COME

It's hardly news that Corporate America has been shelling out big bucks for equipment in recent years—particularly for computers and other information technology that enable companies to raise productivity and output while restructuring their workforces. Now, however, there are signs that capital spending is gaining momentum and broadening its scope. The result, says economist Stephen S. Roach of Morgan Stanley & Co., could be "a major capital spending boom that rivals the spending spree of the late 1960s and early '70s."

While real outlays for information technology soared at a 31% annual rate

in the final quarter of 1993 (and were up 27% for the year as a whole), Roach notes that spending on heavy industrial equipment and structures also accelerated in the fourth quarter—posting annual rates of 22.4% and 10.3%, respectively. "Business investment," he says, "finally appears to be looking beyond restructuring to capacity expansion and updating of the basic capital stock."

Underscoring the trend is the government's latest survey of capital-spending plans, which projects a 9.8% rise in real outlays in 1994, up from 7% projected late last year. And the March survey of the National Federation of Independent Business indicates that 38% of small businesses plan capital outlays in the next six months, the most since the monthly survey began in 1986.

Economists point to three developments that suggest the investment surge will persist. The first is growing capacity constraints. In March, the operating rates of a number of industries—lumber, primary metals, computers and office equipment, motor vehicles, textiles, paper, mining, and petroleum products—clocked in above 90%, and electrical machinery came in at 85.5%

At the same time, economist Joseph Carson of Dean Witter Reynolds Inc. notes that the ratio of the market value of corporate stocks to the current or replacement cost of physical assets moved above 1 last year for the third year in a row, hitting a record 1.38. (It's still comfortably above 1, despite the recent market decline.) According to a theory originated by Nobel laureate James Tobin of Yale University, when this ratio is below 1, as it was during the 1980s, businesses tend to buy their own shares or expand by acquiring other companies. When it is above 1, on the other hand, businesses tend to invest in new equipment to produce capital gains for their shareholders.

"The last time the ratio was above 1," says Carson, "was in the 1960s, and we had an investment boom. I think history will repeat itself."

Another incentive to invest, argues economist Rosanne M. Cahn of CS First Boston Corp., is the age of the capital stock. She calculates that in 1992 and 1993 the net age of business equipment, excluding computers and motor vehicles, was the highest it has been in the entire postwar period. And the average age of industrial buildings was the highest since 1950. "If the economy stays reasonably strong," says Cahn, "replacement demand will take off."

Roach, for one, thinks the current spending boom is likely to persist. And he predicts that its widening scope will gradually shift the emphasis from downsizing to job formation.

THINGS GO BETTER WITH MULTINATIONALS —EXCEPT JOBS

It pays to go global. A new Conference Board study of 1,250 American manufacturing companies from 1987 to 1991 finds that multinationals of all sizes and in all industries outperformed their strictly domestic U.S. counterparts—growing more than twice as fast in sales and earning significantly higher returns on equity and assets.

The multinationals' employment record is another story, however. Recent research by Harvard University economist Robert Z. Lawrence indicates that domestic manufacturing employment shrank more among U.S. multinationals between 1977 and 1989 than in the overall manufacturing sector. But it's also striking, says Lawrence, that these multinationals reduced their job ros overseas at about the same rate as they did at home.

A BREAK WITH CHINA COULD FAN U.S. INFLATION FEARS

With America running a $23 billi trade deficit with China, some o servers argue that China will be the l loser if its actions cause the U.S. to voke its most-favored-nation (MFN) tr ing status. But economist Neal M. Sos of CS First Boston Corp. warns that su an outcome also has potentially harmf implications for the U.S., too.

Soss estimates that loss of MF would raise the U.S. tariff rate on Ch nese goods from about 8.8% to ov 50%. Noting that China's exports to t U.S. are mainly toys, apparel, footwe and electronics (including nearly half all toys sold in the U.S.), he figu s that such a hike would push up the co sumer price index by 0.15% directly. In if other toy, apparel, and footwear pr es also rose in response, the CPI co well increase by 1% or 2%, prompt the inflation-wary Federal Reserve o step harder on the monetary brakes

LETTING THE AIR OUT OF JAPAN'S PUFFED-UP SURPLUS

Although Japan's trade surplus re $14 billion last year, it now is i a downtrend that should accelerate in co ing months, predict economists at M gan Guaranty Trust Co. Much of the s in recent years, they note, was the res of the impact of the soaring yen co bined with falling dollar prices of impo ed commodities. Now, these trends se to be ending—and perhaps reversing

With the trade-weighted yen up m than 25% last year, import volumes h been soaring—even as Japanese co sumption remains depressed and exp volumes decline. America's motor-veh exports to Japan, for example, jum by 50% in 1993, and the Japanese-U trade surplus has slipped recently. Ir ically, just as the rising yen in rec years pushed up Japan's trade surplu dollars, a weakening yen at this ju ture, says Morgan, would cause the s plus to shrink more rapidly.

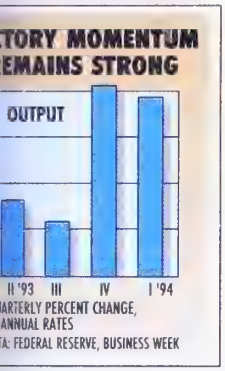
2, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

HE FED'S HIKES ON'T FAZE FACTORIES MUCH

he U. S. factory sector may feel like the lucky student who can hide behind the tallest kid in the class when the teacher is looking for a few knuckles rap. Manufacturing has long been the Federal Re-ve's whipping boy when it comes time to slow down economy. But this time, factories may avoid much of pain of this year's round of interest-rate hikes.

ndoubtedly, higher borrowing costs will curtail housing some factory activity, especially in consumer dur-s such as furniture and appliances, which are typical-ought on credit. But long-term interest rates have n rising since October, and the industrial sector has n going like gangbusters for two quarters.



Indeed, output of manufacturers, utilities, and mines increased by 0.5% in March, the 10th consecutive advance. Factory output alone rose a stronger 0.6%, despite a slowdown in auto production, after Detroit's torrid pace in February. For the first quarter, factory output grew at a 7.8% annual rate, on top of an 8.4% gallop in the fourth period (chart).

ooking ahead, a moderate pace in consumer and busi-spending, along with the need to rebuild inventories, support the industrial sector this year. The latest sur-by the National Association of Manufacturers shows ving optimism among small manufacturers. The NAM 70% of small companies see sales "increasing substan-." And if export growth pumps up the second half, as pected, production will show even more muscle.

IIS THIRD ME MAY)T BE IE CHARM

Amid this growing momentum, the Fed executed its third quarter-point hike in the federal funds rate in 11 weeks on Apr. 18, to 3.75%. The action rocked the re-ly quiet financial markets with a surprising pickup in peed of monetary tightening (page 24). In response, nercial banks lifted their prime rates by a half-point, 75%, and stock and bond prices plunged.

it despite manufacturing's dynamism, the timing of Fed's move probably came in response to other fac-First, the financial markets had calmed down follow-past rate hikes. Also, no new economic data were sed that day, so the Fed's move appeared preemptive not in reaction to strong numbers.

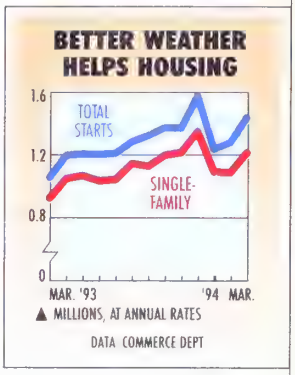
Moreover, the hike, made at Fed Chairman Alan Greenspan's discretion between policy meetings, reinforced the Fed chief's leadership role after the press reported that he may be losing influence on the policymaking committee. Most Fed-watchers had pegged the next rate rise to the May 17 policy meeting. Now, that is the most likely date for the Fed's fourth hike, probably including an increase in the discount rate, currently at 3%.

After that, however, the pace of tightening may slow. One reason: First-quarter growth in real gross domestic product appears to have been less than the markets had feared. That's because the huge widening in the February trade deficit suggests that trade alone subtracted more than one percentage point from last quarter's growth.

OPERATING RATES ARE ON THE RISE

The Fed's action was clearly an acknowledgment of the strength in manufacturing and the resulting rise in capacity utilization—usually a warning of faster inflation. Operating rates for all industry rose to 83.6% in March, from 83.4% in February. Manufacturing used 82.8% of its capacity in March, up from 82.5%. Several industries, including steel, computers, and paper, operate above 90%.

Are those high operating rates inflationary? Not necessarily. Greater worker productivity means more output is being created with the same amount of capacity. And U. S. businesses are planning to invest heavily in new plants and equipment this year. Meanwhile, global outsourcing is still a safety valve when capacity is under pressure in the U. S.



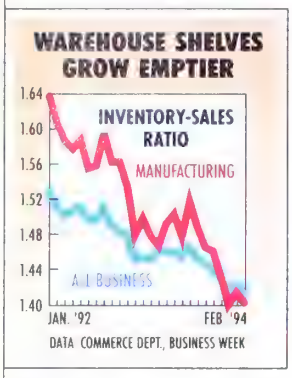
The rise in long rates will have its most conspicuous impact on the housing sector and its suppliers within the manufacturing sector. Higher mortgage rates hit just as construction costs began to rise. For now, buyers are flocking to open houses and rushing to lock in rates.

Housing starts in March rebounded further from their weather-depressed January level. Starts jumped 12.1% to an annual rate of 1.47 million, following a 3.4% gain in February. Still, those increases hardly recouped January's 21.2% plunge (chart). For the quarter, starts are 8.3% below the fourth-quarter. Homebuilding will continue to increase in the spring and then taper off as demand wanes.

That's how homebuilders see it. The percentage of

ERIC HOFFMANN/BW

builders who expect "good" sales in the next six months fell sharply in April, to 38%, according to the National Association of Home Builders. That's down from 48% in March and 72% in November.



Fewer housing starts this summer will mean a slowdown in the production of building materials, appliances, and other home-related goods. Even before housing's contribution to the gross domestic product begins to diminish, however, inventory rebuilding may take its place of a source of growth.

Indeed, when compared to sales, business inventories have almost never been lower. In February, inventories at factories, wholesalers, and retailers rose 0.5%, but sales jumped 1.2%. Manufacturers' stock levels rose 0.3%, and sales jumped 1.1%. As a result, the ratio of business inventories to sales is close to its record low of December, 1993 (chart).

With demand still growing, businesses will need to stock more goods. Car dealers already face shortages of some popular models. Inventory rebuilding has not been a sizable contributor to economic growth in this expansion. That may change this year, perhaps as early as the second quarter.

EXPORTS AWAIT RECOVERIES ABROAD

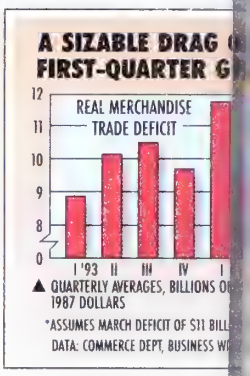
By the second half of this year, manufacturing may also start to see some extra lift from exports, which have been a big disappointment so far in 1994.

In February, a 3.6% drop in merchandise exports, coupled with a 1.6% rise in imports, sharply widened the merchandise trade deficit. It rose to $12.4 billion, from $10.2 billion in January. The trade gap for all goods and services widened to $9.7 billion in February, from $6.6 billion.

The export decline was the second in a row, push down price-adjusted exports to their lowest level in months. Even assuming a bounceback in foreign sh ments in March, the deterioration in the trade def last quarter appears to have offset a large chunk of mestic demand (chart).

In fact, the healthy pace in domestic demand means t imports will continue to rise at their double-digit rat the past two years. So any significant improvement trade will have to come from exports. Export gro has been supported by demand from developing co tries. Shipments to Latin America and Southeast A in January and February were up 10.3% from a y ago, while total exports rose just 3.7%.

Boosting overall exports, though, will depend on recoveries in Europe and Japan. The problem is that Fed tightening runs the risk of delaying a European upturn by keeping long-term rates in Europe higher than they would otherwise be.



That's because the sell-off in U. S. stocks and bonds has dominoed into foreign markets. When the yield on 10-year Treasury bonds rose by 20 basis points on Apr. 18, the rate similar German and British securities rose 13 and 27 b points, respectively. Until Europe's financial markets decouple from the bearish U. S. market, weak domestic mand on the Continent must suffer yet another drag

Even if strong export growth doesn't materia though, demand here in the U. S. should remain hea enough to keep industrial output growing and the e omy humming. Indeed, unlike past cycles of Fed tigh ing, a more productive, less inflation-prone manufactu sector may turn out to be the star pupil of this ye economy.

THE WEEK AHEAD

EMPLOYMENT COST INDEX

Tuesday, Apr. 26, 8:30 a.m.
Wages and benefits for civilian workers probably rose 0.9% in the first quarter, according to the median forecast of economists surveyed by MMS International, a unit of McGraw-Hill Inc. That implies a 3.2% rise from a year ago, slightly below the 3.5% pace in the fourth quarter.

CONSUMER CONFIDENCE

Tuesday, Apr. 26, 10 a.m.
The Conference Board's index of consumer confidence for April probably rose to 87 from 86.7 in March. The University of Michigan's preliminary reading of consumer sentiment for April posted a gain, but rising interest rates and a weak stock market could dampen consumer spirits.

DURABLE GOODS ORDERS

Wednesday, Apr. 27, 8:30 a.m.
Orders for durable goods in March probably rebounded by 1.2%, says MMS, following a 2.6% drop in February.

GROSS DOMESTIC PRODUCT

Thursday, Apr. 28, 8:30 a.m.
First-quarter real gross domestic product likely rose at an annual rate of 3.4%--half of the fourth quarter's 7% advance, according to the median forecast. The GDP price deflator probably increased at a 2.7% pace.

PERSONAL INCOME

Friday, Apr. 29, 8:30 a.m.
The MMS consensus expects that sonal income rose a strong 0.8 March. That gain reflects the mo surge in payrolls and the longer w week. Flush with income, consu probably lifted their spending by a dy 0.5%. In February, income rose and spending was up 1%.

NEW SINGLE-FAMILY HOME SALES

Friday, Apr. 29, 10 a.m.
March home sales likely climbed t annual rate of 700,000, from Febru 649,000, helped by better weather fears that rates will rise further.

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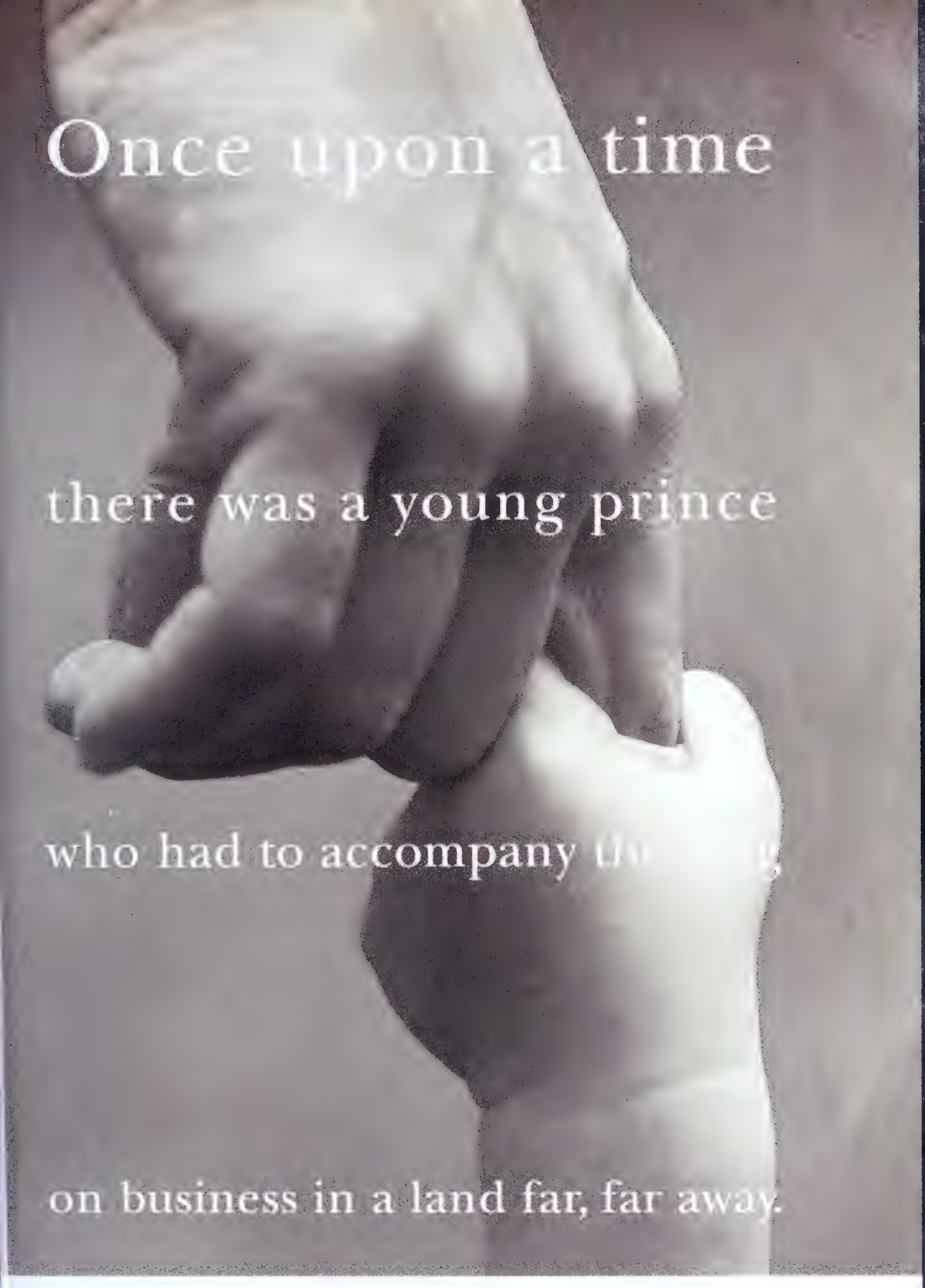

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Beginning May 15

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Kids Menu

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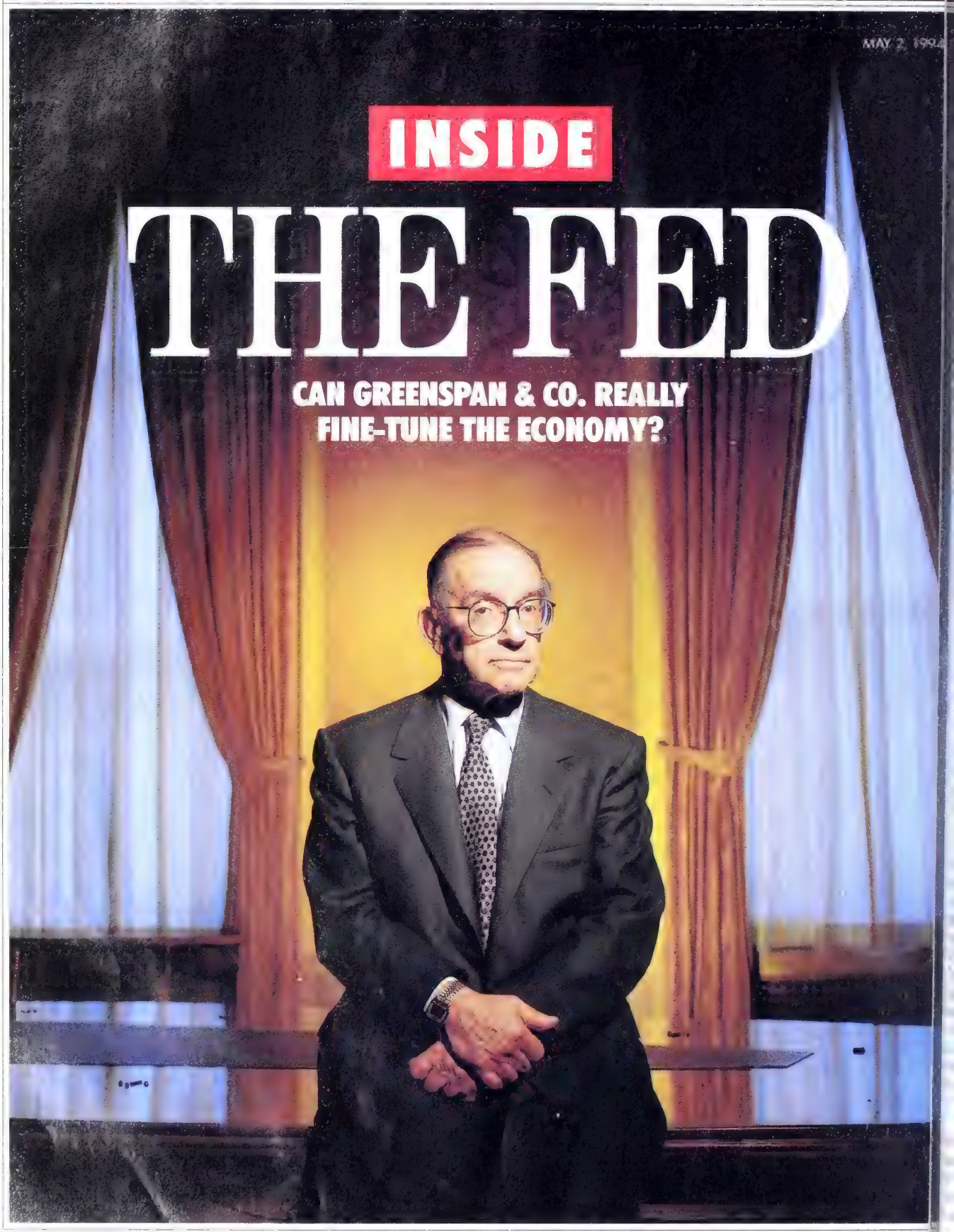
tin kids club] Arrive with a child and a business agenda and you'll find us fully prepared to help
)th. For every hotel is equipped with highchairs, strollers and lists of bonded babysitters. There are special gifts,
the new Westin Kids Club, to make your child feel more at ease. And, of course, we'll do everything within
wer to help your meeting run smoothly, so you can get back to your little prince or princess as soon as possible.


MAY 2, 1994
INSIDE
THE FED
CAN GREENSPAN & CO. REALLY FINE-TUNE THE ECONOMY?

t was mid-April. Financial markets were only just recovering from the carnage unleashed by two quick Fed Reserve interest-rate hikes. Bond ds had been driven up a full per age point. The Dow Jones industrial rage was down 306 points. And te House economic coordinator Rob E. Rubin was worried. Fed Chairman n Greenspan, however, was adamant. ce yourself, Greenspan warned Ru more tough monetary medicine is on vay.

reenspan was as good as his word. n Apr. 18 conference call, Fed policy ers agreed to implement the next se of a plan that had been hatched 10 ks earlier. To move monetary policy n stimulative to "neutral," the Fed ld nudge short rates up a quarter t a month until reaching some un ified target. For Greenspan & Co., oing the economy from overheating more important than calming ers' nerves.

ather than inspiring confidence, gh, the Fed's latest maneuver jolted ncial markets even more. Congres al Democrats grumbled. And busi executives have begun to wonder if verzealous central bank is comfort only with an anemic economic pace. Fed "should leave well enough e," fumes Ralph A. Beattie, chief fi cial officer of Haggar Corp., the Dal clothesmaker. "They're trying to fix roblem that most people don't see as y serious."

ED SIGNALS. The jitters are justifi . Greenspan's public signals have n confusing, in part reflecting an more complicated global economy. ering monetary policy has become e perilous than ever. The natural stion: Just what's going on inside Fed?

lenty. Greenspan and his colleagues unprecedented challenges to their ty to manage the economy. The ex ve growth of exotic financial instru ts has weakened the central bank's ty to control the growth of money ly. Traditional early-warning signals no longer work to detect the onset flation. Even though capacity utiliza is rising and U. S. labor markets ightening, for example, the ability merican companies to shift produc offshore may mean that inflation is of an imminent threat than statistics est.

olatile global markets, meanwhile, n that a small Fed action can be nified into a nasty worldwide jolt. markets don't have a clue what 'ed's doing, and the uncertainty has

WHY GREENSPAN DOESN'T SMILE MUCH

Here's why it's so tough for the Fed to create monetary policy today:

PHANTOM MONEY

Anticipating inflation has become trickier. Because of the investor shift from savings instruments to mutual funds, traditional measures of money are no longer as accurate. As a result, the Fed has variously said it tracks "inflationary expectations," commodity and gold prices, and the "neutrality" of interest rates.

BAD INDICATORS

The globalization of the economy has made some indicators less meaningful. The shift to overseas manufacturing has distorted capacity utilization measures, and productivity gains have challenged theorems about the trade-off between unemployment and inflation.

GLOBAL MARKET MANIA

The growth of foreign-exchange markets and speculative instruments has led to a global web that can suddenly unravel. The sharp bond market reaction to the Mar. 22 tightening surprised Fed officials, who hadn't realized how vulnerable highly leveraged global credit markets had become.

POLITICAL PRESSURE

Restive Democratic lawmakers are forcing the traditionally secretive Fed to operate more openly. But the Fed's tentative efforts to disclose decisions have backfired by roiling the stock and bond markets.

driven up long rates," says Allen Sinai, chief economist of Lehman Brothers Global Economics.

The jitters have been heightened by the prospect of personnel shifts within the Fed: Two empty chairs have given President Clinton the opportunity to impose his imprint on the nation's central bank. He will name Council of Economic Advisers Member Alan S. Blinder to the bank's vacant vice-chairmanship. And, BUSINESS WEEK has learned, Berkeley labor economist Janet L. Yellen, another pro-growth voice, is in line to be nominated as a governor.

BOOM SIGNS. At its heart, the Fed's thinking is simple: Move now or risk an acceleration of inflation next year. Fed officials first became seriously concerned last December, when the economy showed unmistakable signs of a boom as the expansion neared the end of its second year. They also agreed that the 3% federal funds rate—the charge on overnight interbank loans—was too low. But officials didn't act immediately.

When the Federal Open Market Committee met on Feb. 3-4, there was quick agreement on the need to raise rates. Insiders say the only debate centered on how high to go and how quickly to proceed. Greenspan refuses to say what target he has in mind, but other Fed officials have hinted it could be in the range of 4% to 4½%. The idea is to hold short rates at 75 to 150 basis points above the current inflation rate. "We have a range," says one Fed official. "If we didn't, we'd be flying blind. But we're not."

At the February meeting, some Fed officials, including Governor Lawrence B. Lindsey, argued for moving to the target range in one jump. But Greenspan, ever the gradualist, argued that after five years without a rate increase, such a drastic step would be too much for the markets. Ultimately, the FOMC agreed on a strategy to raise rates in quarter-point steps: on Feb. 4, at the next FOMC meeting Mar. 22, and again halfway toward the next meeting scheduled for May 17. Fed officials hint that another hike is coming in May, taking federal funds up to 4%.

The approach isn't selling well on Main Street. Even before the latest Fed action, Goodyear Tire & Rubber Co. Chairman Stanley C. Gault cautioned: "We've got be to be very careful we don't spook the birds off the roof." Now, he adds, "the three increases in rates have been premature." Indeed, economic growth already has slowed from 7% in last year's fourth quarter to an estimated 3% or 4% in the first quarter of 1994.

And the interest rate hikes since Feb. 4 are certain to slow such interest-sensitive sectors as autos and housing later this year. Indeed, the Clinton Administration won't suffer in silence through more than another quarter point or two. "The President's not thrilled," says a senior Clinton economic adviser. "But he understands that this may be necessary for the long-term good of the economy."

Meanwhile, Greenspan has left a trail of confusion with his quick public embrace, and equally swift abandonment, of a series of monetary guideposts. For the past year, the Fed has looked at everything from gold and other commodity prices to inflationary expectations to the level of financial speculation as guides to preemptive action.

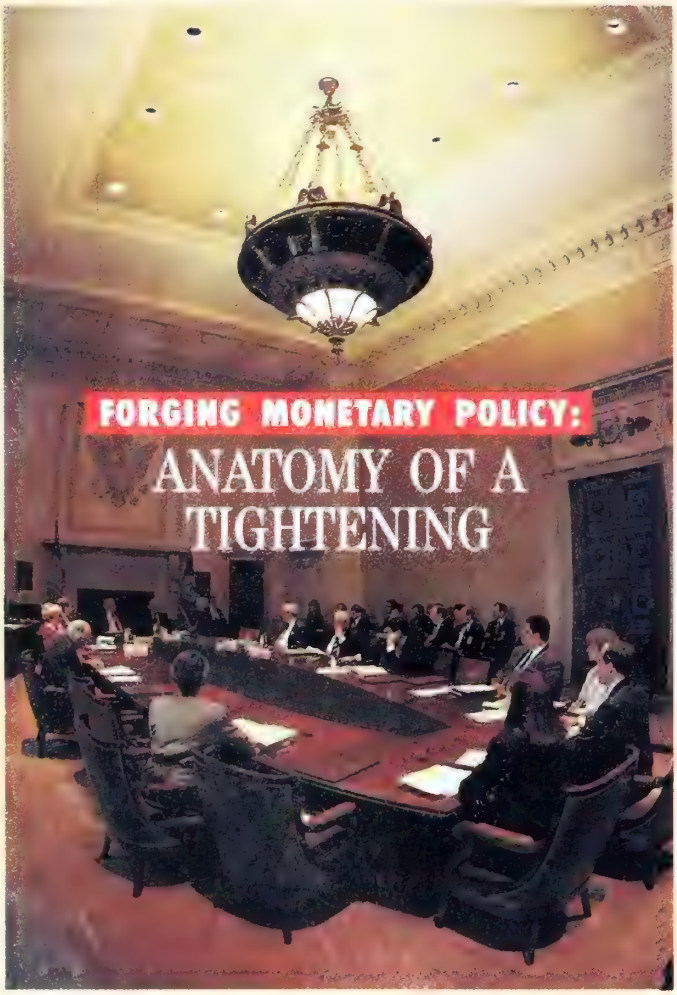
Ironically, the Fed could be adding to the confusion with a new effort to make its proceedings more public. In response to demands from congressional Democrats, the FOMC took the unprecedented step of announcing its February rate increase immediately. This ended a long tradition of delaying disclosure for six weeks and letting the markets guess what had been done. The markets responded with a massive sell-off; the Dow dropped 96 points in one day.

The Fed also set a trap for itself by announcing that the February vote was unanimous. When it refused to disclose the vote at the March meeting, it immediately set off speculation that there had been dissents from the decision. The Fed still hasn't decided what to do if the FOMC decides to take no action at a meeting. And it's still unsure whether to speed release of FOMC minutes and expand summaries that gloss over sharp divisions within the panel.

While Fed governors argue about how much sunshine to let into their deliberations, they remain united behind the correctness of their early-strike strategy. "Inflation comes from an overheated economy," says Governor Edward W. Kelley Jr. "The economy is growing at a rate that's not sustainable over the long term. Monetary policy works with t lags. You can't wait until you see dence of inflation. By then it's embed in the economy and becomes much h er to wring out."

Though many outside economists s port this view, some think the Fed is quick on the trigger. They concede the economy is at a stage of expan where, historically, inflation has begu be a problem. But for now, global c petition and rapid productivity growt the U. S. have depressed price Tighter labor markets and supply b necks in the U. S. may no longer b bingers of inflation when there's so slack worldwide. "There's no reas believe you're running into capacity straints or inflation problems," say versity of Texas economist Jam Galbraith. "The Fed is creating mon that doesn't exist."

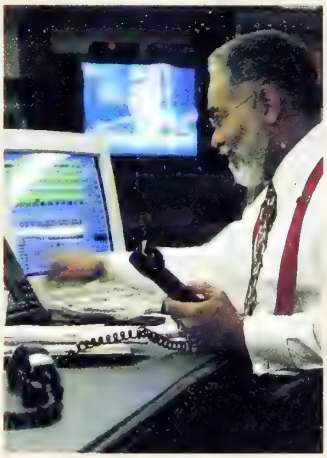
The Fed's moves, though, aren't ing immediate alarm in executive s Many companies have made them less vulnerable to rate increases



FORGING MONETARY POLICY:
ANATOMY OF A TIGHTENING

OCT. 21, 1993

Skittish bond markets roiled by an upbeat Philadelphia Fed analysis of regional economies.



NOV. 17

In a victory for the Administration, Congress approves North American Free Trade Agreement.

NOV. 30

Oil prices plummet by $1 a barrel on OPEC's decision not to lower production; consumer confidence up sharply in November.

JAN. 12, 1994

Clinton seeks a spec prosecutor to invest his investment in th Whitewater develop

ng indebtedness and refinancing -term borrowings at low rates. Case oint: Union Carbide Corp. reduced rates on 90% of its debt from 9% to through refinancing.

ther corporations reacted to recent hikes by improving their balance ts. Many followed the approach of ialty Foods Corp., a $2.2 billion mak- f dairy and bakery products in Deer- , Ill. In April, Chief Financial Officer J. Liska rushed to convert part of company's $400 million in variable- debt to a fixed-rate. "I went as long moment," he says. "We're tied to the prime rate, so every move means we're paying more." Indeed, major banks, which trimmed the prime very slowly while the Fed was cutting rates in 1990-92, have been quick to raise it from 6% to 6¾%.

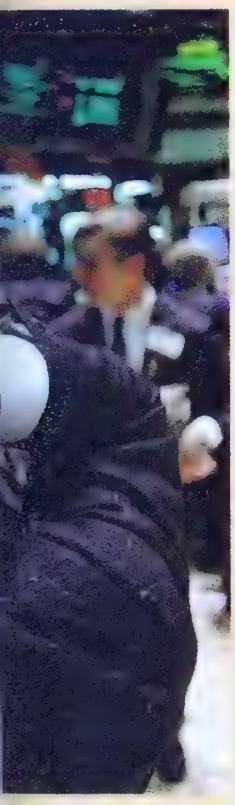
Overseas, meanwhile, higher rates have dealt a rude surprise to many economies counting on cheap money to fuel badly needed recoveries. From Asia to Latin America, a flood of corporate financings has slowed to a trickle as stock and bond markets have dried up. In Japan, long-term interest rates have climbed more than a half-point, to 4%. That may help stall a meager recovery that some economists think will bring no better than 1% GDP growth in 1994. And yields on 10-year German government bonds have shot up nearly three-quarters of a percentage point, to 6.5%, even though the country is struggling to emerge from its worst recession in decades.

Back at the Fed's marble headquarters, the complaints of Main Street aren't going unheard. But the central bank believes that a slight slowdown in growth is a small price to pay for a sustained noninflationary expansion. The Fed's goal is to keep the economy growing at 2.5% to 3%, while keeping inflation below 3%.

Historically, the Fed's attempts to make such fine calibrations in the economy have been a painful failure. So no matter how measured it appears in its execution, Greenspan's gradualism carries a large risk for the U. S. economy. Head off inflation, or choke growth: Which will it be?

In the atrium of the Fed headquarters hang two chandeliers decorated with the 12 signs of the zodiac. Fitting symbolism, veteran Fed watchers would say. Once you go behind the technical explanations for what the Fed is doing, what it ultimately comes down to is fate. With Fed policy at a turning point, Alan Greenspan's best hope, along with good gut instinct, may be that success is written in the stars.

By Owen Ullmann and Dean Foust in Washington, with Greg Burns and Susan Chandler in Chicago and bureau reports



an warns Congress raise rates "at some ow Jones industrial hits high of 3978.

FEB. 1
Bush appointee David Mullins resigns as Fed vice-chairman; bonds fall on the news.

FEB. 4
Fed announces quarter-point hike in its short-term rate, to 3.25%; stocks fall 96 points.

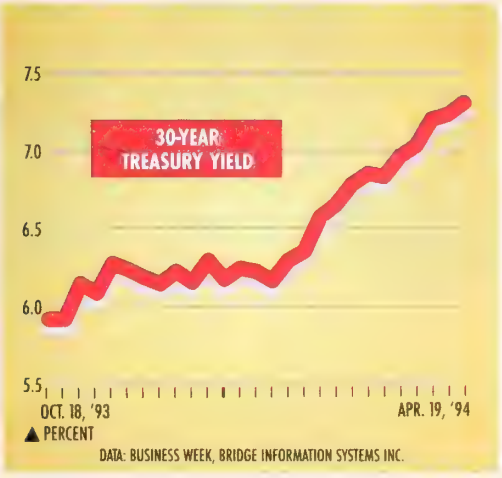
FEB. 9
U.S. suspends trade talks with Japan on the eve of Clinton's summit with Hosokawa.

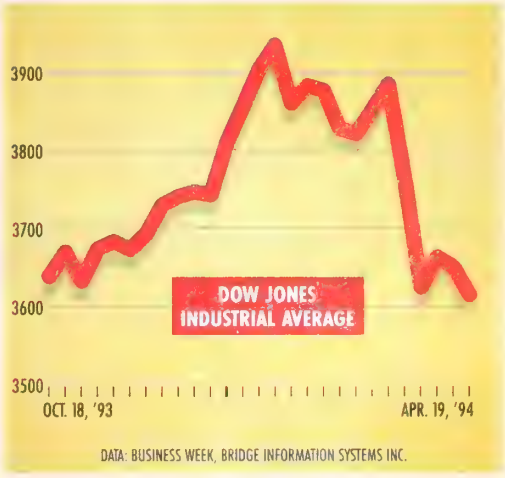
MAR. 1
Fourth-quarter GDP growth revised to 7.5% from earlier 5.9% estimate, atop strong corporate profits; long-bond yield climbs to 6.77%.

MAR. 22
Fed votes to raise short-term rates again; bond yields soar in the days following.

MAR. 23
Mexican presidential candidate Luis Donaldo Colosio assassinated as preelection tension spills over.

APR. 18
Greenspan announces another quarter-point increase in the Fed funds rate. Stocks take another hit.





could on everything I had," he says. looking like a genius today."

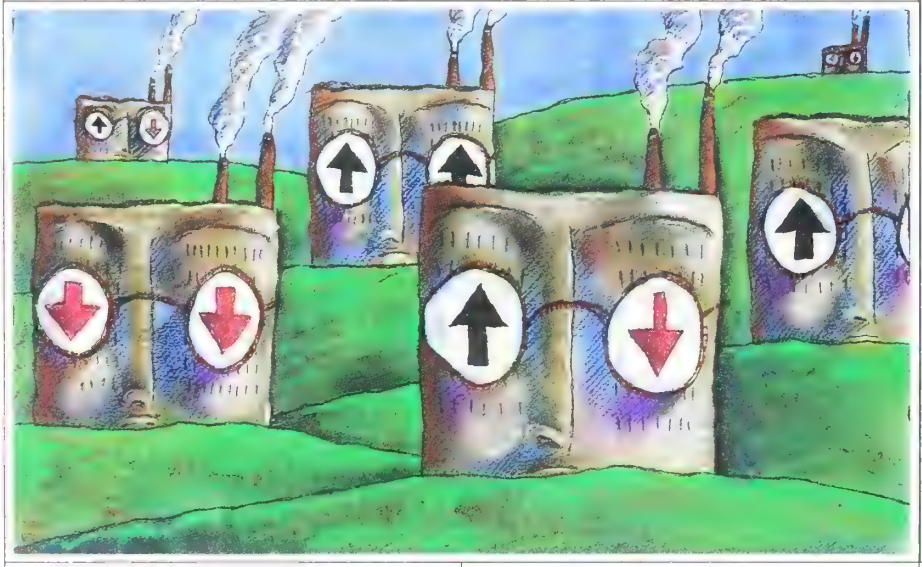
few more rate hikes, though, and pects could change. C. J. Vitner & -whose potato chips are a staple in ago bowling alleys and taverns— ed its distribution network to the after landing a contract to sell its s in Jewel Food's 175 stores. But ident William A. Vitner says the at of further hikes could prevent hipmaker from going ahead with a illion to $6 million warehouse ex- ion. "We would shelve that for the

CORPORATE PROFITS

THE GOOD, THE BAD, AND THE UNKNOWN

Early returns have the market worried about 1994's first quarter

Roiling, roiling, roiling. With interest rates on the rise and inflation lurking, the stock market has been jittery. Add another item for traders to worry about: the prospect that corporate earnings may not be as strong as forecasters had predicted. Measured by BUSINESS WEEK'S flash report of first-quarter profits, however, most of the news should be good. Average earnings were up 21%, on a 9% jump in sales. Early results don't include the major oil companies, Ford, GM, and IBM. Once they check in, profits will shrink somewhat. Then the market may really need a tranquilizer.



	Current qtr. sales (Millions)
INDUSTRIALS	**92,091.3**
ABBOTT LABORATORIES	2,215.2
ALCOA	2,221.6
BOISE CASCADE	1,014.1
BRISTOL-MYERS SQUIBB	2,833.9
CATERPILLAR	3,286.0
CHAMPION INTERNATIONAL	1,226.1
CHRYSLER	13,223.0
COCA-COLA	3,352.0
CORNING	948.9
CPC INTERNATIONAL	1,737.7
GENERAL ELECTRIC	14,182.0
GOODRICH (B. F.)	502.4
HASBRO	489.1
IBP	2,819.4
INLAND STEEL	1,075.7
INTERNATIONAL PAPER	3,400.0
LILLY (ELI)	1,637.0
LOCKHEED	3,025.0
McDONNELL DOUGLAS	2,953.0
MERCK	3,514.3
PHILIP MORRIS	12,727.0
REEBOK INTERNATIONAL	857.4
REYNOLDS METALS	1,261.1
RUBBERMAID	491.6
UNION CARBIDE	1,126.0
UPJOHN	916.0
UNITED TECHNOLOGIES	4,838.0
WEYERHAEUSER	2,385.8
WHIRLPOOL	1,832.0
SERVICES	**34,592.7**
AMR	3,808.0
BANK OF NEW YORK	NA
BANKAMERICA	NA
BLOCKBUSTER ENTERTAINMENT	883.0
CBS	1,246.9
CHASE MANHATTAN	NA
CHEMICAL BANKING	NA
CITICORP	NA
CONSOLIDATED FREIGHTWAYS	1,103.2
CONTINENTAL BANK	NA
DOW JONES	499.2
FEDERAL HOME LOAN MORTGAGE	1,574.0
FOOD LION	1,804.0
HILTON HOTELS	338.8

CORPORATE PROFITS

THE DIVIDEND ALSO RISES

Increases are now coming at a rate not seen since 1981

Dividends are popping up all over. Corporations, flush with earnings and finally convinced that the economic recovery isn't going to evaporate, are loosening purse strings and rewarding shareholders. The upshot: The number of dividend increases reported in first-quarter 1994 hit a 13-year high.

The first quarter's tally of 551 dividend hikes is the highest in any first quarter since 1981, confirms Standard & Poor's Corp. Arnold Kaufman, editor of S&P's *The Outlook*, attributes much of the rise to the 7% increase in gross domestic product in 1994's fourth quarter. Companies in the S&P 500-stock index raised dividends 4.3% in the first quarter vs. a year earlier, and Kaufman expects an average increase for the full year of 7% or 8%—vs. just 2.5% in 1993. "Companies feel confident now," Kaufman says. "One thing they hate to do is increase a dividend and then have to cut it back."

Perhaps the most dramatic example is Citicorp's announcement on Apr. 18 that it will reinstate its dividend. Concerns over capital levels and souring investments led the banking giant to suspend its payout in the third quarter of 1991. But after racking up earnings of $2.2 billion in 1993, Citi announced that it would be paying a 15¢ dividend in the second quarter. "The combination of creased interest income, no growth loans, and good profitability is ta made for dividend increases" by banking industry, says Bruce Baughr co-manager of the $275 million Frar Rising Dividends Fund.

UNDERWHELMING. Other companie the financial industry also have n money to pass along to their sharehl ers. After first-quarter net inc soared to a record $371.8 million, M Lynch & Co. announced a 15% divid boost on Apr. 19. On Apr. 20, Du Bradstreet Inc. weighed in with a increase.

Still, many of the recent dividen creases have been underwhelming reflects wariness on the part of cor tions," says Geraldine Weiss, edit *Investment Quality Trends*, a La (Calif.) newsletter. "They don't wa

% chg.	Est. EPS (2/17)	Reported EPS	Diff.
+10	0.81	0.81	—
+6	0.46	0.45	–0.01
NM	0.00	0.04*	+0.04
NM	–0.81	–1.35	–0.54
+1	1.14	1.14	—
+465	0.92	1.89	+0.97
NM	–0.27	–0.41	–0.14
+77	2.19	2.55	+0.36
+15	0.41	0.40	–0.01
+16	0.27	0.28	+0.01
+9	0.63	0.63	—
–2	1.49	1.50*	+0.01
NM	NA	0.11	NA
+1	0.32	0.30	–0.02
+69	0.44	0.43	–0.01
NM	0.20	0.03	–0.17
+13	0.79	0.58	–0.21
–11	1.25	1.14	–0.11
+21	1.40	1.45	+0.05
–25	2.70	3.41	+0.71
+10	0.56	0.54	–0.02
–4	1.24	1.34	+0.10
–3	0.80	0.77	–0.03
NM	–0.41	–0.46	–0.05
+2	0.35	0.32	–0.03
+50	0.30	0.39	+0.09
–11	0.71	0.76	+0.05
+66	0.83	0.73	–0.10
–29	0.60	0.62	+0.02
+272	0.93	0.90	–0.03
+42	0.74	0.86	+0.12
NM	–0.02	–0.30	–0.28
+33	1.55	1.73*	+0.18
+6	1.26	1.27	+0.01
+62	0.28	0.29	+0.01
+28	3.28	4.23	+0.95
NM	1.14	1.80	+0.66
–6	1.20	1.13	–0.07
+65	1.12	1.24	+0.12
+85	0.21	0.28	+0.07
+3	0.88	1.02	+0.14
+40	0.37	0.43	+0.06
+37	1.14	1.44	+0.30
+42	0.07	0.06	–0.01
–2	0.52	0.47	–0.05

	Current qtr. sales (Millions)	% chg.	Qtr. profits (Millions)	% chg.	Est. EPS (2/17)	Reported EPS	Diff.
HOME SHOPPING NETWORK	274.2	+15	6.7	NM	0.20	0.07	–0.13
HUMANA	853.0	+9	32.0	+78	0.18	0.20	+0.02
ITT	5,548.0	+3	319	+82	1.53	1.77	+0.24
McGRAW-HILL	559.8	+20	15.0	–2	0.21	0.30	+0.09
MERRILL LYNCH	4,738.8	+20	371.8	+9	1.41	1.68	+0.27
MORGAN (J. P.)	NA	NA	345.0	–20	1.84	1.69	–0.15
NATIONSBANK	NA	NA	417.0	+48	1.39	1.52	+0.13
NORWEST	NA	NA	190.5	+20	0.58	0.59	+0.01
OFFICE DEPOT	994.8	+71	22.9	+62	0.21	0.23	+0.02
PAINEWEBBER GROUP	1,082.4	+16	55.6	–21	1.10	0.71	–0.39
ROADWAY SERVICES	1,023.7	+20	15.9	–21	0.49	0.40	–0.09
SCHWAB (CHARLES)	323.1	+20	38.2	+8	0.56	0.65	+0.09
TIME WARNER	3,485.0	+6	–51.0	NM	–0.19	–0.14	+0.05
TRIBUNE	482.8	+11	40.1	+35	0.48	0.53	+0.05
USAIR	1,685.9	–2	–196.7	NM	–1.22	–3.64	–2.42
WELLS FARGO	NA	NA	202.0	+87	3.16	3.41	+0.25
WMX TECHNOLOGIES	2,284.1	+7	162.6	–18	0.36	0.34	–0.02
TECHNOLOGY	21,531.9	+16	1,640.3	+21	0.82	0.87	+0.05
ADVANCED MICRO DEVICES	513.1	+26	84.6	+38	0.55	0.85	+0.30
COMPAQ COMPUTER	2,278.0	+41	213.0	+109	1.69	2.40	+0.71
CONNER PERIPHERALS	564.0	+1	23.8	NM	0.25	0.46	+0.21
DIGITAL EQUIPMENT†	3,258.8	–6	–183.3	NM	–0.40	–1.34	–0.94
GENENTECH	189.0	+33	38.9	+171	0.19	0.33	+0.14
INTEL	2,660.0	+31	617.0	+13	1.34	1.40	+0.06
MICROSOFT†	1,244.0	+30	256.0	+5	1.01	0.84	–0.17
MOTOROLA	4,693.0	+29	298.0	+46	0.51	0.54	+0.03
POLAROID	462.6	–1	1.4	NM	0.13	0.03	–0.10
RAYTHEON	2,314.0	+5	169.3	+7	1.30	1.25	–0.05
SUN MICROSYSTEMS	1,196.0	+5	57.5	+11	0.64	0.60	–0.04
TRW	2,159.4	+6	64.1	+25	0.92	0.97	+0.05
UTILITIES & TELECOM	41,819.6	+6	3,523.1	+19	0.70	0.66	–0.04
AMERITECH	2,990.4	+7	43.8	–85	0.66	0.69*	+0.03
AT&T	16,560.0	+5	1,094.0	+17	0.78	0.80	+0.02
BELL ATLANTIC	3,373.2	+7	395.9	+6	0.88	0.91	+0.03
COMSAT	169.5	+2	18.3	0	0.48	0.45	–0.03
DOMINION RESOURCES	1,167.0	+6	151.4	+14	0.75	0.84	+0.09
ENRON	2,449.7	+32	173.1	+18	0.71	0.70	–0.01
GTE	4,746.0	–2	504.0	+10	0.53	0.52	–0.01
OHIO EDISON	601.2	+1	69.3	+1	0.48	0.44	–0.04
PACIFIC TELESIS	2,294.0	0	282.0	NM	0.72	0.67	–0.05
PUBLIC SERVICE ENT. GROUP	1,794.4	+13	239.9	+7	0.91	0.94	+0.03
SPRINT	3,033.2	+12	227.4	NM	0.55	0.65	+0.10
US WEST	2,641.0	+5	324.0	+9	0.75	0.73	–0.02

NA = not available NM = not meaningful † Third-quarter results * EPS adjusted for special items

DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF MCGRAW-HILL INC. EARNINGS ESTIMATE DATA PROVIDED BY I/B/E/S INC., NEW YORK, NY. I/B/E/S IS A REGISTERED TRADEMARK OF I/B/E/S INC

extend themselves by promising rous increases, but they're satisfying eholders with at least something." deed, the double-digit hikes by s and such cyclical companies as Motor Co. are the exception rather the rule. After years of dividend ts averaging about 18% annually, maker Bristol-Myers Squibb Co. l its dividend by just 1.4% in the quarter. Lackluster earnings also dividend increases from such com- s as Philip Morris Cos. in the single s. "There's too much uncertainty in narket and the economy right now," Weiss. "Companies are being a lit- ghtfisted because they don't know expenses will be until legislation is d on health-care reform."

rprisingly, electric utilities are g the biggest tightwads of all. typically pay out 50% of their earnings in dividends and have a long history of raising dividends annually. But poor profits have ratcheted some utilities' payout ratios to historically high levels of 75% or more, explains Roger D. Newell, who manages the $940 million Vanguard Equity-Income Fund. That leaves little room for further hikes.

One example: After 46 consecutive years of making higher payouts, Dallas-based Texas Utilities Co. acknowledges that it won't be able to increase its dividend this year. Weiss thinks Texas Utilities may even have to omit its dividend entirely, although the company says it has no plans for such a move.

At most companies, the outlook is good for continued increases. The average yield on S&P 500 stocks is still just 2.9%, low by historical standards. With interest rates rising, dividend yields may have to rise, too, to stay competitive. So, if the economy keeps expanding and the Federal Reserve's tightening doesn't spook consumers, the odds look good for dividends to keep rising. Now if the darned stock market would just turn around....

By Suzanne Woolley in New York

PAYOUTS ARE POPPING AGAIN

	First-quarter dividend	Increase from prior quarter
BRISTOL-MYERS SQUIBB	0.73	1.4%
CITICORP*	0.15	NM
FORD**	0.45	12.5
MOTOROLA	0.14	27.0
PHILIP MORRIS	0.69	6.2

*Suspended dividend payments in 1991's third quarter
**Class B shares NM = not meaningful DATA: BUSINESS WEEK

CITIES

CHICAGO: HIZZONER DOES A DOUBLE TAKE

Mayor Daley wakes up to the jobs exodus and woos business with a passion

Chicago Mayor Richard M. Daley's common-man, street-smart demeanor has made him a natural heir to his famous father. But his touch hasn't been as deft when it comes to economic development. Campaigning in a gentrifying North Side neighborhood in 1989, he dismayed industrialists with his vision of turning small factories there into yuppie condominiums. And less than two years ago, Daley stunned economic leaders in newspaper and TV sound bites with the message that manufacturing was passé.

Today, there's a very different tone. As the mayor tours Chicago's wards, he routinely stops in on local businesses. He's playing a direct role in retaining such employers as Tootsie Roll Industries Inc., which recently expanded on the Southwest Side, or bringing fast-growing upstarts in from the suburbs. And he's meeting for breakfast with 15 different Chicago executives every three weeks.

LAST STRAW. What happened? Simply put, the lure of the 'burbs and out-of-state locations was turning Chicago's job exodus into a rout. The mayor finally caught on. The last straw: In late 1992, only months after USX–U. S. Steel Group and Oscar Mayer Foods Corp. announced plant closings, catalog giant Spiegel Inc. decided to uproot 2,200 jobs from Daley's own Bridgeport neighborhood in the city to Columbus, Ohio. "It looked like we were heading toward another bankruptcy case like New York," notes Edward J. Noha, chairman of CNA Financial Corp. and chairman of the city's Economic Development Commission.

Daley can no longer be accused of neglecting the city's business community. In late April, the mayor launched a record $220 million spending program on pockmarked streets, viaducts, and sewers. And his long-standing efforts to bring a riverboat gambling-and-entertainment complex to downtown Chicago got back on track early in April, when a bill was introduced in the Illinois legislature.

He's hoping to channel as much as $100 million in annual casino tax revenue into job training, public education, and cleanup of contaminated city land—all top items on business' agenda. And Chicago's status as one of the nation's highest-taxing business centers may change: The mayor is considering scaling back the $5-per-employee monthly head tax and the 5% tax on interstate phone calls.

The 51-year-old mayor is also moving to call in political chits from Springfield to Washington. Daley's relationship with Republican Governor James Edgar is warming, which could prove helpful in winning passage of the casino legislation and a broad reassessment of state taxation. But Daley also is close to Dawn Clark Netsch, the Democrat who's vying to unseat Edgar this fall. The mayor is milking his solid connection to the White House, seeking federal fun for land cleanup and trying to gain "e powerment zone" status for an area the city. And the Democratic Nation Committee is leaning toward awardi its 1996 convention to a city that hop it can erase the memory of a bloo gathering in 1968 presided over by D ey's father.

"STRONG HEARTBEAT." Not surprising Daley's efforts are winning kudos fr his business constituency. "He und stands that if business improves, soc difficulties improve," observes Leo Mullin, president of the city's larg bank, First Chicago Corp. Executiv also are impressed by Daley's privati tion of many government services.

In fact, the downward spiral in ma facturing jobs appears have eased, and huge overhang in vac downtown real esta though still at nea 20%, finally appears be receding. Banks s as First Chicago, al with big accounting consulting firms, prospering by virtue Chicago's position at heart of the robust M west economy. And tailers such as Montg ery Ward, Home De and Builders Square actively eyeing city si

To be sure, the still is beset by grave cial problems. Th why retail display ma facturer RTC Indust Inc. recently mo most of its operations well as 300 employ from Chicago's So west Side to Rol Meadows, 30 miles a "What finally turne off the city was w job candidates saw where we were didn't bother to show up for intervie says President Richard Nathan. An bigger loss: On Apr. 18, Motorola Inc cided against locating a big cellular-p plant, providing 3,000 jobs, in the ci

Daley seems to take the challe in stride. Rolling an unlit cigar in hands, he admits that Chicago won' the ideal location for all kinds of m facturers. But, he's clearly more up than just two years ago. "I think city has a strong heartbeat," he s It's a sentiment a growing numbe employers now share.

By Richard A. Melcher in Chi

After business grumbled, Daley launched a $220 million program to fix streets, viaducts, and sewers—and he's looking for ways to clean up abandoned industrial sites

OCRAT FISHER AND FAMILY: B-SCHOOL JARGON WAS JETTISONED FOR FOLKSY ADS

OPULISTS I PINSTRIPES

xan Richard Fisher is one of a new breed of rich, free-spending politicians

A year ago, a political greenhorn named Richard W. Fisher stiffly faced the television cameras and ed Texas voters to send him to the S. Senate to replace Lloyd M. Bent- Fisher—who owns a Dallas money- nagement firm—may be a whiz at iness, but he turned out to be a dud he polls. On Election Day, he fin- d a distant fifth, and Republican Bailey Hutchison went on to win seat in a runoff.

his year, Fisher was back, minus pinstripes and B-school jargon. Com- cials showed the shirtsleeved candi- chatting up folks at a small-town . And it worked: Recast as a "small nessman," Fisher ed to a convincing over former Attor- General Jim Mattox Apr. 12 Democratic off. Now, he's a at to unseat Hutchi- in the general elec- next fall.

sher's transforma- took money—and he plenty. The 45-year- executive spent $4 on out of his own et in a year-long ef- to convince Demo- that a millionaire investor can make government work for average citizens. "He went from 'successful businessman' to 'man of the people,' and it was totally believable," explains Jerry L. Polinard, a political scientist at the University of Texas Pan American.

Fisher is typical of a new crop of business executives who are willing to spend big to gain office (table). Inspired by Ross Perot's 1992 Presidential bid, they paint themselves as untainted outsiders who can't be bought by special interests. Many of them are winning, too. In a Mar. 8 Republican primary, Eugene Fontenot Jr., a Houston physician, upset the party's handpicked congressional candidate after spending more than $850,000 of his own money. And in California, GOP Representative Michael Huffington, who spent some $3 million to oust a Republican incumbent two years ago, could spend more than $10 million this year as he pursues Democrat Dianne Feinstein's U. S. Senate seat.

Fisher and the other free-spending candidates, of course, deny that they're buying seats. On the stump, Fisher earnestly stresses his support for a balanced budget, term limits, and government reform. Hutchison's retort: Once in office, Fisher would quickly be co-opted by liberal Democrats.

SHIFTING ALLIANCES. But Fisher is not the political naïf some critics take him for. His political roots go way back. Fisher's mentor, Democratic financier Robert V. Roosa, helped him find a job in the Carter Administration as an aide to Treasury Secretary W. Michael Blumenthal. After leaving government, Fisher opened an office for investment bank Brown Brothers Harriman & Co. in Dallas—the hometown of his wife, Nancy, daughter of Representative Jim Collins (R-Tex.). Seven years later, he struck out on his own, founding a company that now manages about $400 million for wealthy investors.

Fisher's foes portray him as a dilettante who believes in little but winning public office. Says Texas Republican Chairman Fred Meyer: "His decisions are based on expediency. He puts his finger up to see which way the wind is blowing."

And, indeed, Fisher has flopped around a bit in his allegiances. In 1985, he helped then Arkansas Governor Bill Clinton launch the centrist Democratic Leadership Council. Later, he sought a position in the Bush White House. And in 1992, he served as an adviser to Perot. But he denies any inconsistencies in all this. "If I were an opportunist, I'd run as a Republican," Fisher asserts. "I'm running in a party that has real problems in this state."

The candidate, who trails Hutchison by nine points according to a recent poll, faces an uphill battle. But he won't lack for money or bravado. When Ann W. Richards, the Democratic governor of Texas, first warned him of the perils of running for office, Fisher shot back: "Have you ever dealt with bond traders at Salomon?"

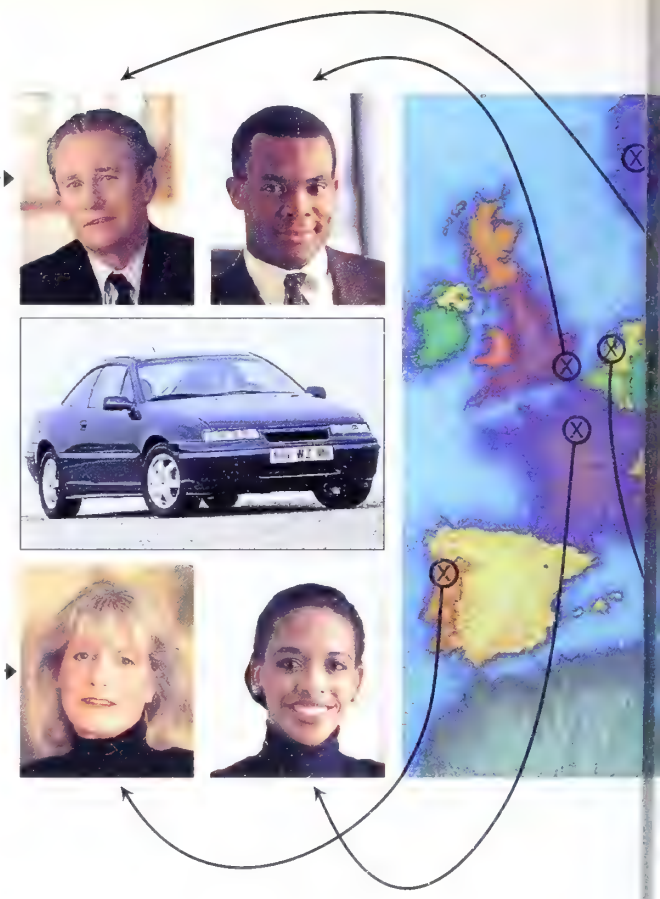
By Richard S. Dunham in Washington and Wendy Zellner in Dallas

RICH AND RUNNING

More wealthy candidates are spending their own money to win congressional nominations this year. Among them:

RICHARD FISHER	The former Perot adviser will battle Republican Senator Kay Bailey Hutchison.
MICHAEL HUFFINGTON	The millionaire son of a Texas oilman spent $3 million to win the 1992 GOP primary. Now, he wants the Senate seat held by Dianne Feinstein.
EUGENE FONTENOT	A Houston doctor and real estate investor, he put more than $850,000 into the GOP primary. Fontenot now faces Ken Bentsen, nephew of Lloyd Bentsen.
RICHARD SYBERT	The L.A. attorney has invested $400,000 to challenge Democratic Representative Anthony C. Beilenson.

WHEN A LAWYER AT GM'S HQ IN ZURICH IS WORKING ON A DOCUMENT IN CONJUNCTION WITH STAFF IN LONDON, PARIS AND ANTWERP, ALL HAVE ACCESS TO THE SAME INFORMATION VIA NOTES. AND WITH NOTES, ALL TEAM MEMBERS CAN CONTRIBUTE AND KEEP UP TO DATE



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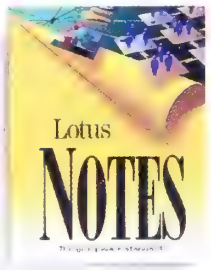

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Commentary/by Paul Magnusson

THIS WATCHDOG ISN'T ASLEEP, IT'S COMATOSE

The year was 1990. Senator Albert Gore Jr. (D-Tenn.) was in a lather over the Treasury Dept.'s refusal to block the purchase of a key U. S. semiconductor-equipment maker by a Japanese competitor, Nippon Sanso Co. "Encouraging foreign investment is one thing. Allowing unrestricted purchases of key technologies is quite another," fumed Gore. To the Bush Administration, he charged, protecting America's technological jewels "is just a big joke."

So when Vice-President Gore was placed in charge of the Clinton Administration's technology policy last year, it seemed likely foreign purchasers would have a tougher time buying U. S. aerospace, telecommunications, computer, and biotechnology companies. But foreign investors needn't have worried. If anything, the agency that monitors foreign purchases of strategic U. S. assets, Treasury's Committee on Foreign Investment in the U. S. (CFIUS), has become even less aggressive. As a result, America is still being stripped of scores of cutting-edge companies. "The watchman is asleep on the wall," frets one high-tech industry official.

RELIEVED. Just how somnolent has CFIUS become? Despite 98 foreign investments in, or takeovers of, American high-tech companies in 1993, the panel didn't conduct a single investigation of the potential harm to national security, according to CFIUS data and figures compiled by the Economic Strategy Institute, a Washington think tank. Even the laissez-faire Bush Administration ordered CFIUS to conduct full-scale investigations of 13 foreign takeovers of sensitive high-tech companies from 1988 to 1992.

Gore evidently hasn't been paying attention, either. In April, Nippon Sanso notified CFIUS that it intends to buy its fourth U. S. maker of semiconductor gas-containment equipment. Gore's office, which didn't return BUSINESS WEEK's phone calls, has been silent this time. "The remarkable thing is how little the policy has changed from the previous Administration," says a relieved Christopher R. Wall, an attorney who represents foreign clients.

While overseas buyers may be pleased, congressional critics of the Administration's strategy are up in arms. Four House committee chairmen wrote Clinton last September to complain that CFIUS has no computerized database on foreign acquisitions, no capacity for evaluating the issue from a broad perspective, and no permanent director. Nothing has changed since. And the committee has met only 10 times in 15 months. The General Accounting Office is investigating CFIUS' shortcomings in a report to be released in midsummer.

CFIUS officials and their supporters say there's no need to be more vigilant. After all, the number of foreign acquisitions of high-tech companies dropped by half since the 1990 peak. And foreign direct investment may be supplying needed capital to U. S. companies squeezed by declining defens procurement. Besides, the principa buyers—Britain, Japan, France, Ger many—are strong U. S. allies.

True enough. But the issue now i economic security, not just militar preparedness. And these acquisition are starting to have some troublin consequences. The General Accoun ing Office, for instance, has noted th propensity of Japanese companies t reserve their most advanced technol gy for their own customer or *keiretsu* partners i Japan. And while Japanes investments in U. S. asset have fallen off, they are lik ly to rebound once th Japanese economy revive particularly as a stronge yen makes bargains of U. S companies.

EXPLOSION. A particular da ger is that critical comp nents needed by America manufacturers will be co trolled by companies ove seas. For example, the U. S share of the $12.8 billio semiconductor-materials ar -packaging market ha dropped from 70% to just 8 since 1977, according to son industry estimates. Mea while, the Japanese share semiconductor materials h climbed to 70%. The resul ing vulnerability of U. S. manufacture was made all too clear last July, wh an explosion in Sumitomo Chemica Niihama City plant wiped out 55% the world capacity for high-purity EC resin, a key component in chipmakin With Japanese producers dominati the market, their preferred custome got first claim on surviving inventor

The Sumitomo explosion should ha served as a wake-up call to the slee CFIUS. A revival of the panel may n actually lead to blockage of any fo eign purchases. But at least it wou give the public confidence that t White House is paying attention to t competitiveness of American hi technology.

> Despite Gore's rhetoric, the agency that monitors foreign purchases of strategic U.S. assets is doing little

Magnusson follows economic poli from BUSINESS WEEK's Washingt bureau.

AN BERLUSCONI NTANGLE HIS WEB?

next Prime Minister's business interests pose conflicts at every turn

ilvio Berlusconi, Italy's billionaire-turned-politician, is on a winning ak. In late March, the 57-old led a triumphant t-wing coalition to a spec-lar victory in national ions. Then, on Apr. 16, andpicked candidate land- key post as head of the an Senate. If that weren't gh, the next day, Berlus- s soccer team, AC Milan, the Italian national cham- ship for the third year ing. Oh yes, and by the of April, Berlusconi will st surely become Italy's postwar Prime Minister. ut all the luck in the ld won't quickly solve usconi's biggest problem: to erect a convincing Chi- wall between Berlusco- he new leader of Italy, Berlusconi, owner of the billion media conglomer- Fininvest Comunicazioni. can't come up with a wa- ight separation of inter- , his new government d be hobbled from the outset.

BERLUSCONI'S OFTEN-FAWNING TREATMENT BY HIS MEDIA UNITS ISN'T LIKELY TO CHANGE EVEN IF THEY GO INTO A TRUST

I'S SHARE. Of course, millionaires e come to power before, from John ennedy in the U. S. to Britain's Har- Macmillan. But they had nowhere the business breadth of the self- e Berlusconi. The three national vision stations controlled by Finin- divvy up the lion's share of Italy's illion TV ad market. Its Milan-based dadori is Italy's largest book pub- r and puts out a dazzling array of azines, including the top sweekly, *Panorama*. Finin- sports Italy's largest rmarket and department- chain, Standa, as well as -management groups, in- rs, and professional ath- teams.

ith so many interests, pos- ties for conflicts are ywhere. Plans to privatize m pension plans, in the m program of Berlusconi is allies, would affect Fin- st's insurance and fund- agement activities. The group's broadcasting holdings depend on government licenses and antitrust regulations. "The Berlusconi empire is all-pervasive, so it's an all-pervasive problem," charges Vincenzo Visco, a prominent member of the opposition Democratic Left Party.

Even before his political coup, Berlusconi had started to restructure his holdings. Franco Tatò, who earned a reputation as a tough manager at Olivetti and Germany's Triumph-Adler, was brought in last October. Banks holding more than $2 billion in Fininvest debt were beginning to get nervous as Italy's worst recession since World War II slashed the company's bread-and-butter ad revenues. Goldman, Sachs & Co. chipped in with a plan to spin off a new company—Silvio Berlusconi Editore—grouping all of Fininvest's publishing interests.

Now, Fininvest faces much broader changes (table). The Goldman Sachs plan was ditched in mid-April in favor of a new fast-track public sell-off arranged by Milan's Mediobanca of 53% of Mondadori by mid-June. The deal could raise as much as $540 million. Company officials are also negotiating a spin-off of all or part of Standa, the 285-store chain Berlusconi picked up in 1989 for about $750 million.

"MORE TRANSPARENCY." Finding a way to distance Berlusconi from television, Fininvest's core business, is trickier. Current managers may oppose a Tatò plan to unite all three Fininvest stations, plus the company's huge advertising interests, under a single corporate umbrella, for the moment code-named Big TV. If he does combine those ventures, say Fininvest executives, it could lead to a stock sale.

Such plans are a sharp shift for one of Italy's most secretive companies. Berlusconi was behind almost every decision, from corporate acquisitions to what TV game-show hosts should wear. But he has already given up operating control. Now, says Fedele Confalonieri, who replaced Berlusconi as Fininvest's chairman, it's a new deal for the group, with "more authority to managers, more transparency, and widespread ownership."

Will it be enough to convince Italians that their Prime Minister isn't mixing his public and private agendas? Probably not. That's why aides are looking at various plans, including putting Fininvest in the hands of a Berlusconi family foundation. But few think that would end the often-fawning treatment of Berlusconi by the media units.

"Berlusconi is aware of possible conflicts of interest," says Antonio Martino, the main economic strategist in Berlusconi's Forza Italia Party. "He has caught the virus of politics, and if it comes to choosing between his company and politics, he would rather give up his business." But until Prime Minister Berlusconi does take steps to sell off his holdings completely, the conflict-of-interest issue will not go away.

By John Rossant in Rome

BREAKING UP BERLUSCONI'S FININVEST

Holding	Annual sales Billions	Disposition
THREE NATIONAL TV CHANNELS	$2.3	Public stock offerings
MONDADORI PUBLISHING	1.2	Sell 53% stake to public
STANDA SUPERMARKETS	3.2	Negotiating a sale
SPORTS TEAMS, INSURANCE, BROKERAGE, AND PROPERTY	0.4	Some to be sold

DATA: BUSINESS WEEK

STRATEGIES

NO BOUNCE FOR RUBBERMAID

Once, the company could do no wrong. Now, Wall Street wants proof

When Chairman Wolfgang R. Schmitt stares out at the inevitably packed house at Rubbermaid Inc.'s annual meeting on Apr. 26, he's likely to confront an unaccustomed sight: sour-faced shareholders.

Although Schmitt will report another record year, Rubbermaid's stock since Jan. 3 has plummeted by more than 10 points, to 24¾, losing $1.6 billion in market value. First-quarter results—a mere 2% earnings increase, to $50.6 million, on sales that rose 2%, to $492 million—confirmed Wall Street's worries.

For more than a decade under former Chairman Stanley C. Gault, who retired in 1991, Rubbermaid could do no wrong. It savvily marketed mundane housewares, had new products galore, and kept costs down. Profits rose steadily, more than quadrupling between 1979 and 1989, and its shares traded at an average 42% premium to the market, says Andrew Shore of PaineWebber Inc.

BAD WEATHER. But the juggernaut has slowed. Despite a barrage of new products, Rubbermaid hasn't seen a sales gain close to its 15% goal since 1989. Schmitt argues that last year's 9% sales growth was "commendable," given low inflation. But Rubbermaid's housewares and Little Tikes Co. toy units aren't gaining like they used to, and smaller divisions such as office products haven't delivered consistent results. "They have made their numbers by trimming expenses," says a shareholder.

Reality hit hard in this year's first quarter. Rubbermaid says bad winter weather scared off consumers even as it curtailed some factory operations. It also says some retailers reduced inventories. But "high-quality growth companies don't use the weather as an excuse," says one investor.

Can Rubbermaid rebound? Schmitt says it already has, calling the first quarter "an aberration" and suggesting the second quarter will match 1993's 15% earnings gain. On Apr. 26, he will announce new initiatives to become more price-competitive and increase productivity, and investments in international operations. But for now, the old cachet—and the pricey stock—is missing.

By Zachary Schiller in Cleveland

RETAILING

BOARDROOM BATTLERS: TISCH (TOP) MAY TRY AGAIN TO BUY MACY'S, CHIEF EXEC ULLMAN (BELOW) WANTS TO KEEP IT INDEPENDENT—AND EX-DIVA SILLS IS A SWING VOTE

THE MELODRAMA AT MACY'S

You can't tell the actors without a playbill? Here's ours

Did you miss Manhattan's fashion show extravaganza in mid-April? Are tickets for the Letterman show unavailable? Don't worry. You still can grab an orchestra seat at one of the biggest shows in town: The battle for R. H. Macy & Co., the department-store chain that is now entering its 29th month of operating in bankruptcy.

The plot's too confusing, you say? You're not the only one who thinks so: Even some of the players don't seem sure of their roles. They're a diverse bunch—everyone from celebrities and former Cabinet members to the usual contingent of power brokers. Adding to the disorder, they all seem to be reading from different scripts.

Every show needs a playbill, so here's BUSINESS WEEK's take on the Macy's drama and its major players:

At center stage is CBS Inc. Chairman Laurence A. Tisch, a Macy's board member. Loews Corp., of which Tisch is chairman, owns roughly $52 million worth of Macy's junk bonds, plus 2.3 million shares, or 17.7%, of its preferred stock. Several other Macy's directors also have big investments. So Tisch has enlisted allies on the board, including Louis Page, who represents Hong Kong billionaire Sir Run Run Shaw, and Harold M. Williams, CEO of the J. Paul Getty Trust.

Tisch and company are struggling bitterly with Fidelity Investments and Prudential Insuran Co.—senior credito each holding abo $500 million worth Macy's senior del Led by Fidelity Daniel Harmetz, th say Macy's is wo less than the $3.6 lion that Macy's mi mannered chairma Myron E. Ullman says it is.

Why is that? In strange plot twi the less Macy's valued at when leaves bankrupt the more the sen creditors get. Tha because senior cre tors likely will paid off mainly in stock. And the l stock that is issued, the more their p tion will be worth.

Tisch and pals, in contrast, w Macy's valued as high as possible. Th might get nothing for their junk deb Macy's emerges from bankruptcy at billion. But if it's valued at, say, $4 lion, they'll at least get something.

The latest shift in the script: A Macy's board meeting on Apr. 18, Ti and Page said they might try to Macy's. Tisch tried once before. But failed to negotiate a deal to pay off Pru's debt, and Macy's toppled i Chapter 11 in January, 1992.

SILLS TRILLS? Who in all this does have an ax to grind? The celebrities course—such as board member Beve Sills Greenough, the former opera d She is playing it down the middle: S said to agree with Ullman's assessm of Macy's value. Henry A. Kissing position isn't known, but as an honor board member he doesn't have a v anyway. Cyrus Vance, another for Secretary of State, is mediating Macy's case.

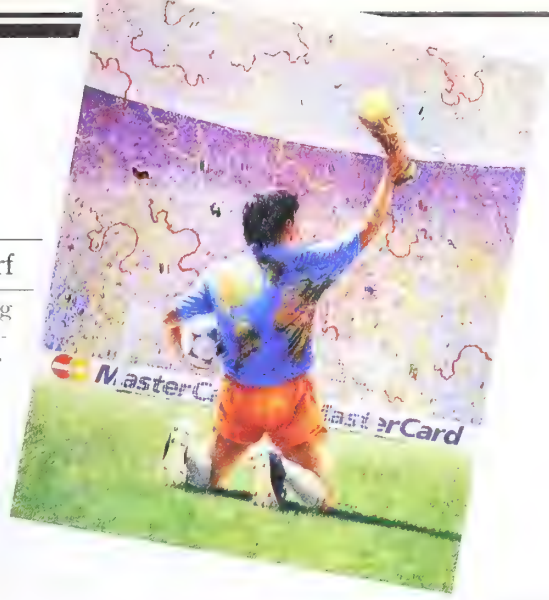
This is a '90s tale, but there is raider involved. He's Allen Questr chief executive of rival Federated partment Stores Inc. Federated touc off the latest round of jockeying for department-store chain in January, w it bought a big piece of senior debt f the Pru. It now hopes to come a owning Macy's.

How will it all play out? The cha of Macy's staying independent are "l ing more remote all the time," says & Phelps Investment Management analyst Barbara Wedelstaedt. But w complaining? The show might even with an aria by Sills.

By Laura Zinn in New

HE WORLD CUP F 'AMBUSH MARKETING'

ficial soccer sponsors are all elbows trying to protect their turf



MASTERCARD WON A SUIT TO PUT THE CUP'S LOGO ON ITS CREDIT CARD

The official trophy is 18-karat gold and weighs 11 pounds. But to the 19 companies that have paid as ch as $75 million apiece to be major nsors of—and promote themselves ing—the upcoming World Cup tournent, the real prize is exposure to ions of consumers. And the big nders are jostling like burly fullbacks protect their piece of the soccer turf. Just look at MasterCard International . It took long-distance carrier Sprint mmunications Co. to federal court in rch in a nasty dispute over which npany could put the World Cup logo its plastic card. Sound silly? Maybe. , even before the German and Boli- teams line up on June 17 for the ning game in Chicago, the cup runh over with corporate disputes. "You ve to be tough, aggressive," says va Heffler, MasterCard's vice-presit for promotions. "You do what it es to protect your program."

ENSE OVERLAP. Why? An average of million people worldwide will watch h of the 52 games, the Cup organizcommittee estimates—a huge audie that has attracted the *crème de la me* of international marketers, inding such heavyweights as Coca-Cola and McDonald's Corp.

But the organizers themselves are tly at fault for any strife between keters: They've created a raft of ofconflicting sponsorships. Worldwide keting rights were licensed, for inice, to Canon Inc. for cameras and i Photo Film Co. for film. But no acmodation was made for Fuji's disable cameras, and Fuji eventually to agree not to sell its cameras at ld Cup sites. Alan I. Rothenberg, irman of the organizing committee, s he approved selling sponsorship of U. S. team to both Snickers and Conntal Baking Co.'s Hostess cupcakes, only after defining Snickers as the ial snack food and Hostess as the ial baked good.

ome disputes aren't so easily reed. Rothenberg said he quietly oped Walt Disney Co., which had atively agreed to provide opening closing ceremonies, when Disney ted to "give me Mickey and Chip Dale," and Rothenberg wanted more er in the show. Disney still will e a kids' soccer tournament after the July 17 final. Rothenberg also had to mollify Anheuser-Busch Cos. The beer company was angered when Rothenberg told stadium operators staging Cup regional matches he was considering limiting or banning alcoholic beverages to avoid fights. Rothenberg says now he'll leave it up to the managers, and Anheuser officials agreed to accept that solution.

The World Cup's convoluted hierarchy has added to the confusion. International "official sponsors" are selected by Lucerne-based ISL Marketing, while Rothenberg's organizing committee in Los Angeles chooses the less exclusive "marketing partners." The MasterCard-Sprint lawsuit partly resulted from this setup: MasterCard won international rights, while the U. S. group signed up Sprint. Both companies wanted to use the World Cup logo, but the federal court ruled in favor of MasterCard. Sprint says it will appeal.

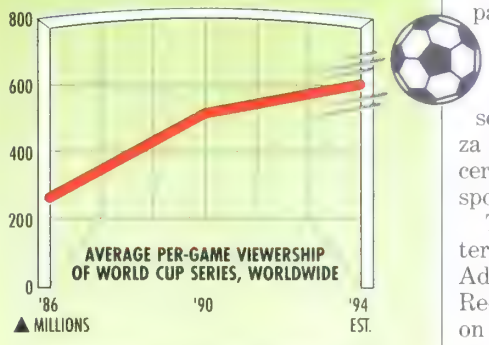
As the games approach, the conflicts will no doubt escalate. World Cup officials say they'll do their best to protect sponsors from unauthorized "ambush marketers" by going to court to stop those who trample World Cup licenses. Officials, for example, recently filed suit against Italian card maker Panini. Panini intends to sell cards of soccer players in the U. S., even though Upper Deck Co. paid $7 million for the exclusive rights.

Although no company will own up to ambush marketing, many nonsponsors are suddenly using a lot of soccer themes in their marketing. Pizza Hut Inc., for one, has signed up soccer superstar Pele, a MasterCard official spokesman, for ads outside the U. S.

Then there's shoemaker Reebok International Ltd., which lost out to rival Adidas for the World Cup sponsorship. Reebok plans $2 million worth of ads on Spanish-language telecasts of the games to the U. S. and is allowing soccer players it has signed to appear on both Sprint Corp. telephone credit cards and on Wheaties boxes. Ambush? "We don't use the 'A' word," says Peter R. Moore, Reebok's vice-president of global product marketing. "Reebok is doing nothing that involves the official World Cup trademark. We're just utilizing our players in a regular promotion." Regular? Hardly. When much of the civilized world turns its eyes to a mega-sporting event, there is nothing regular about it.

By Ronald Grover in Los Angeles, with Greg Burns in Chicago and bureau reports

THE WORLD CUP AUDIENCE IS HUGE...



...AND SO IS THE COST OF GETTING ITS ATTENTION

PRICE OF WORLD CUP MARKETING TIE-INS

WORLDWIDE TV RIGHTS	$275 MILLION
U.S. TV RIGHTS	$23 MILLION
WORLDWIDE SPONSORSHIP	$20 MILLION
U.S. TV AD PACKAGE OF 52 GAMES, 18 MINUTES PER GAME	$3.5 MILLION

DATA: WORLDCUP USA '94, BUSINESS WEEK

In Business This Week

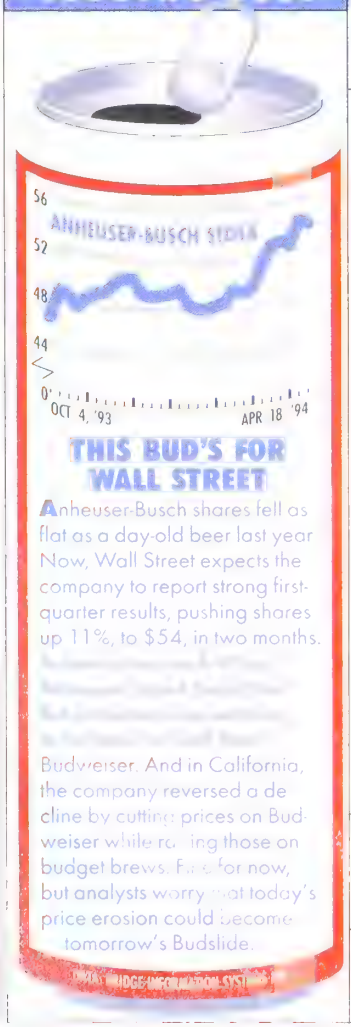
EDITED BY KEITH H. HAMMONDS

A GLOBAL TUNE-UP FOR FORD . . .

Signaling his intent to strengthen Ford's global competitiveness, Chairman Alexander Trotman on Apr. 20 launched a sweeping reorganization aimed at integrating the carmaker's worldwide operations and "get more firepower from Ford's resources." Trotman's goal: eliminate overlap among Ford units in the U. S., Europe, Asia, and Latin America—and save Ford $2 billion to $3 billion a year by the end of the decade. Instead of separate manufacturing, sales, and product-development units for each geographical zone, Trotman will place each function under one executive. Coordinating that new organization will be a new Ford car czar, Edward Hagenlocker, a veteran of Ford's successful truck operations.

Trotman is also trying to streamline Ford's clunky system of developing new vehicles. Ford of Europe Chairman Jacques Nasser will become the product-development chief, overseeing five vehicle platforms, each headed by a vice-president. To overcome existing fiefdoms that have slowed car development in the past, "the people that will run those platforms will be very powerful," says one industry insider. Underscoring that point, Trotman picked William Ford Jr., scion of the founding family, to head large truck development.

CLOSING BELL



THIS BUD'S FOR WALL STREET

Anheuser-Busch shares fell as flat as a day-old beer last year. Now, Wall Street expects the company to report strong first-quarter results, pushing shares up 11%, to $54, in two months.

Budweiser. And in California, the company reversed a decline by cutting prices on Budweiser while rolling those on budget brews. Fine for now, but analysts worry that today's price erosion could become tomorrow's Budslide.

. . . AND A MAJOR DIVESTITURE AT VOLVO

Swedish car company Volvo likes to boast that it's the largest industrial enterprise in the Nordic region, thanks to former Chairman Pehr Gyllenhammar's costly diversification into real estate, cigarettes, food, and drugs. But with Gyllenhammar gone and a new management team on board, Volvo shareholders on Apr. 20 agreed to return the company to its roots as a car manufacturer. By 1996, Volvo will strip itself of all nontransportation assets, leaving only a car, truck, and engine company with about $6 billion in sales—about half of Volvo's former size. On the block is $3.5 billion Branded Consumer Products and a stake in drug company Pharmacia that may fetch as much as $1 billion. Volvo will use proceeds of the sale to build several new car models.

TRIBUNE'S INSIDER ON THE INSIDE TRACK

The management horse race for the top spot at Tribune, the fast-expanding media giant, appears to be resolved. John Madigan, currently executive vice-president overseeing the group's newspaper operations, has been tapped as president and chief operating officer. He becomes odds-on favorite to succeed Chairman and CEO Charles Brumback, who's expected to step down in a year. Insiders say the 57-year-old Madigan narrowly beat out the other leading contender, Executive Vice-President James Dowdle, after the board looked at a host of candidates, including outsiders.

HEADLINER

GRABBING DAYTON HUDSON BY THE THROAT

Kenneth Macke hopes that he has "absolutely nothing" to do after retiring July 2 as chairman of Dayton Hudson. But Robert Ulrich, Macke's successor, will have his hands full.

Heading Ulrich's agenda: dealing with Dayton's Mervyn's department-store chain. A victim of merchandising errors and overconcentration in the weak California market, it has dragged down Dayton's profits for years. Macke says a turnaround is under way, but there's little evidence of that: Same-store sales at Mervyn's fell 9% in the quarter ended Jan. 29.

Ulrich, 50, proved his mettle as CEO of fast-growing Target Stores unit. Analytic and aloof, he doesn't shy fro tough decisions, says Boal Sells, a former Dayton Hu son president: "He always h the business by t throat." At Targe Ulrich alrea has taken on i dustry gian Wal-Mart a Kmart in hot contested urb markets Texas—and winning. The ke better-looking stor with trendy apparel and ho fashions at discount price and lots of them. Last ye Ulrich orchestrated a flas entry for Target in the Chi go area, opening eight sto in one day.

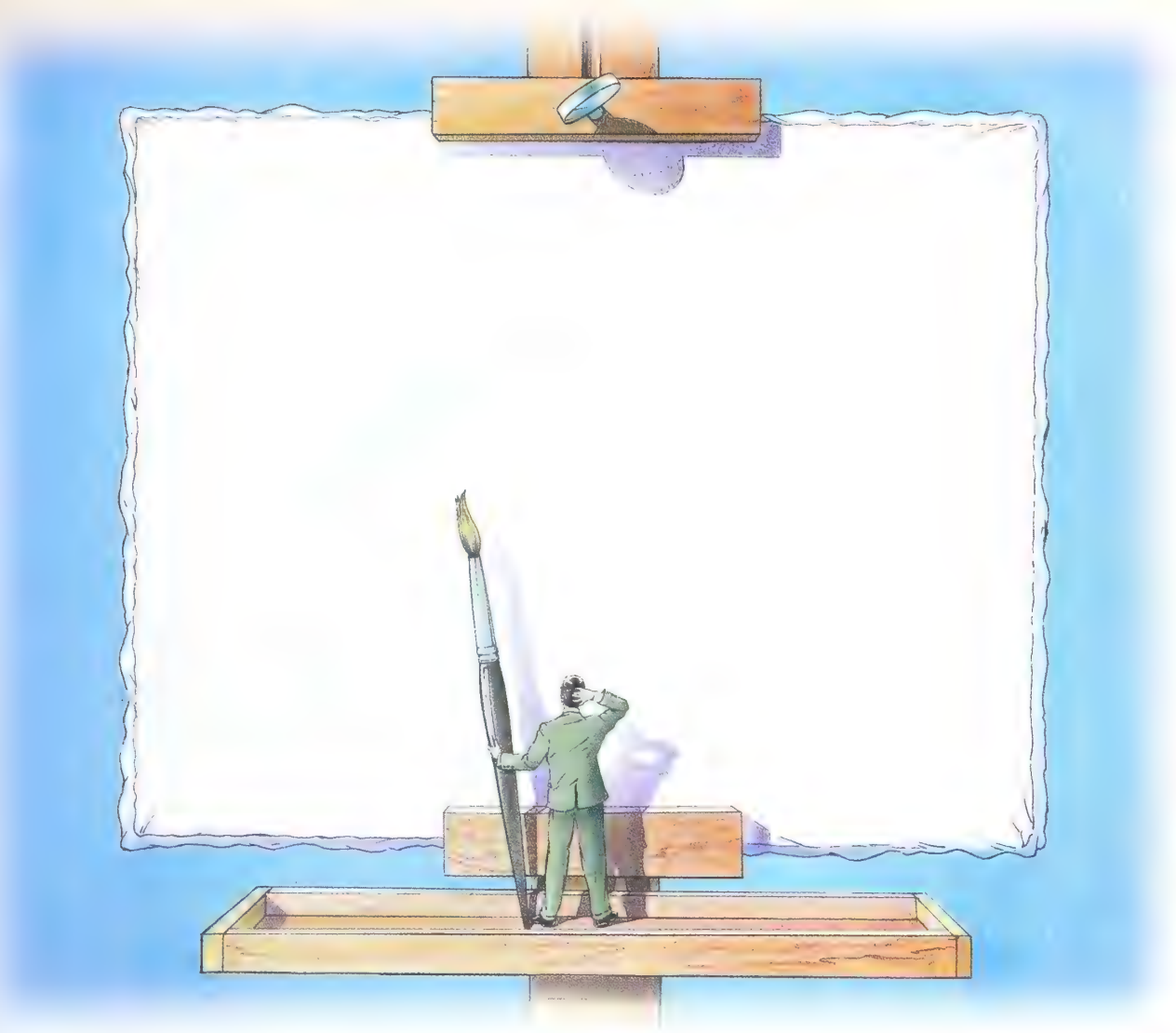
By Susan Chand

COKE'S NEW SODA: JUST O. K. WON'T DO

"Things are going to be OK." So goes the slogan for Coca-Cola's light-brown, slightly fruity new soft drink, OK soda. But Coke is counting on OK—with a core target of 12- to 25-year-olds—to do much better than just all right. At an Apr. 20 briefing in New York, Sergio Zyman, Coke's chief marketing offic said OK, which is to appe in selected markets in M was designed to be a "sign cant" mainstream brand th will draw business from soft-drink segments. Why new brand? "There's late demand for new brands th represent the values of day's youth," Zyman sa Marketing will be heavy Generation X-style irony, fr generic-like packaging to ads (being created by N shop Wieden & Kennedy) the name itself.

ET CETERA . . .

- Figgie International's au tor raised doubt about company's ongoing viabilit
- The Chicago Board of Tr abandoned Globex, hooking with Bloomberg instead.
- GTE expects to offer in pensive pocket-phone serv nationwide by yearend.
- General Electric's n bright idea: an "inducti lightbulb that lasts longer



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EDITED BY STEPHEN H. WILDSTROM

AD TIMING FOR GOOD TRADE AGREEMENT

's signed. It's sealed. Delivery—well, there's a problem. The ink on a new global trade accord isn't quite dry yet, out chances are growing that Congress may embarrass sident Clinton by refusing to act on ratification of the this year. His aides know the General Agreement on Tar- & Trade is in trouble, but he is preoccupied with health- reform and Bosnia and hasn't focused on the issue.

he Uruguay Round accord, initialed by more than 100 e ministers in Marrakesh, Morocco, on Apr. 15, is the most eping rewrite of global trading rules in a -century. Economists estimate that tariff averaging 37% will pump at least $5 tril- into the world economy over the next de. And new safeguards will boost trade in ices and intellectual property, areas where U. S. excels.

o why isn't Congress rushing to approve deal by its Jan. 1, 1995, effective date? main reason is an inside-the-Beltway spat how to recoup lost tariffs. New Congres- al Budget Office estimates will peg the tfall at $14 billion to $16 billion over the t five years. Under pay-as-you-go budget s, Congress must make up the loss. CBO Di- or Robert D. Reischauer opposes U.S. de Representative Mickey Kantor's sugges- the rules be waived. It "would start Con- s down a very slippery slope," Reischauer says.

GEPHARDT: GATT MUST WAIT

PUSH. That sets up a painful election-year scenario for law- ers: Cut spending or raise taxes to fund a trade pact. Pro- als on how to do it have riled Capitol Hill. Senate Minority der Bob Dole (R-Kan.) is miffed that Administration offi- s have suggested cuts in farm subsidies. And Democrats t want to offer the GOP a target by hiking taxes on U. S. sumers so that foreign companies can enjoy lower tariffs. ouse Majority Leader Richard A. Gephardt (D-Mo.), a porter of the accord, wants to postpone action until after the election. "We have a big money problem," he says. Senate international trade subcommittee Chairman Max S. Baucus (D-Mont.), says that while delay would be "an abdication of world leadership," he privately fears it may be inevitable.

Business deserves part of the blame. While support for GATT is broad, corporations haven't launched the sort of intensive lobbying push that ensured passage of the North American Free Trade Agreement. "GATT is so big that most companies see only modest benefits," says Robert D. Hormats, vice-chairman of Goldman, Sachs International. Meanwhile, interest groups are kicking up a storm. The consumer group Public Citizen argues that the agreement will give bureaucrats in Geneva the power over U. S. trade policy. And Senator John C. Danforth (R-Mo.), a Hill free-trade leader, wants side agreements restricting government subsidies to such high-tech companies as Europe's Airbus Industrie.

KEY AREA. Is GATT dead? Hardly. Analysts still expect the implementing legislation to pass, even if held until 1995. "The only thing less popular on Capitol Hill than voting for GATT is letting it die," insists Deputy U. S. Trade Representative Rufus Yerxa, a key negotiator. "After much to-ing and fro-ing, it will pass."

Clinton could force a vote this year, since action is required within 90 days of submission. But the First Lady and other advisers are pressuring him not to let a trade fight interfere with health-care reform.

The same forces made the same argument a year ago for delaying consideration of NAFTA. In the end, Clinton ignored them and won the biggest legislative victory of his first year. Backing down on GATT would damage Clinton in the one area of foreign policy where he has shown effective leadership. The President is running out of time to seize the issue—and stop the quiet erosion of a crucial trade pact.

By Douglas Harbrecht, with Paul Magnusson

ITAL WRAPUP

MPAIGN

lalifornia, with its 54 electoral votes, is critical to Bill Clinton's hopes for lection in 1996. So in addition to ing the state with Presidential vis- earthquake relief money, and de- se-conversion funds, the White use is starting to gear up its politi- operations to again carry a state t Clinton won handily in 1992. John erson, who ran that California cam- gn, is moving from his job as an e to Presidential counselor Bruce dsey to the White House political ce. He'll handle economic-develop- nt issues, with a special focus on Golden State. Emerson, who started in the Administration as deputy head of the White House personnel office, will work closely with Tom Epstein, who manages the Western states portfolio. Now, there'll be two top political aides focusing on California.

LIABILITY

Facing Administration indifference and the hostility of key lawmakers, the campaign to reform product-liability laws is languishing on Capitol Hill. But one sector of manufacturing may be about to get relief from damage suits that can crop up many years after a product is built and sold. Pending legislation, which passed the Senate on a 91-8 vote on Mar. 16, would limit the liability of aircraft manufacturers to 18 years after a plane is delivered. This so-called "statute of repose" has been reposing on the Hill for eight years. But with the backing of companies and unions, it now enjoys broad support in the House. More important, House Judiciary Committee Chairman Jack Brooks (D-Tex.), long a foe of product-liability reform, is prepared to let this narrow measure move forward. Trial lawyers are worried that the bill could be the camel's nose in the product-liability tent, but its progress may have more to do with the desperate state of the U. S. general aviation industry than with a congressional change of heart on the larger issue.

WALKING THE HIGH WIRE

CAN MANDELA SATISFY TOWNSHIPS AND BUSINESS?

MANDELA'S ECONOMIC BLUEPRINT IS SURPRISINGLY AUSTERE

On the surface, South Africa's historic transition to majority rule looks as if it could spin out of control. Troops have been dispatched to the rolling hills of Natal province to keep a lid on violence between the followers of disaffected Zulu Chief Mangosuthu Buthelezi and the soon-to-be ruling African National Congress. Housewives in wealthy northern Johannesburg suburbs are stocking up on toilet paper and canned beans. The jittery currency and stock markets sell off at the slightest provocation.

These are the images beamed around the world. But there's another reality. The last-minute agreement on Apr. 19 that brought Buthelezi and his Inkatha Freedom Party into the election showed a remarkable capacity for political dealmaking that could prove crucial in the coming years. And on the 17th floor of Shell House, the ANC's headquarters in downtown Johannesburg, a hot-shot team of young economists, black and white, is putting the last touches on next year's budget. The deputy head, Tito Mboweni, 35, exudes confidence. The living standards of the poor will improve, he affirms, but "we can't just throw money at problems."

Across town, Rudolf Gouws, chief economist at the Afrikaner Establishment's Rand Merchant Bank and confidant of Finance Minister Derek Keys, takes a call from ANC economic adviser Lieb Loots, a Cape Town academic, and arranges breakfast to discuss government spending. It's the latest in dozens of contacts that have narrowed the gap between largely white-controlled business and the soon-to-be rulers. Recalling that he first met ANC economists in 1989 in Lausanne, when it was still illegal to do so at home, Gouws says: "They've shown a huge change in thinking."

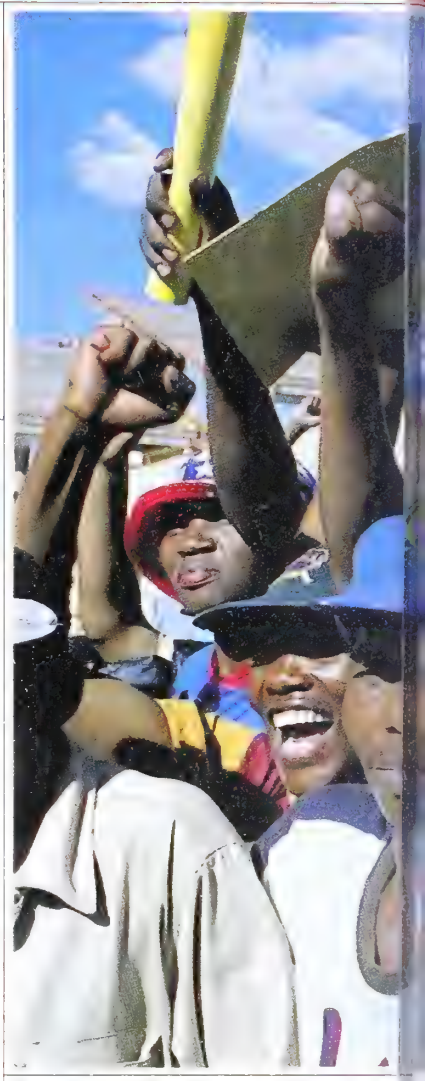
More may ride on this knitting of economic interests than on the Apr. 27 election itself. From that day on, the new Government of National Unity, likely to be dominated by the ANC, will be under constant pressure from its black constituents to spend money to make up for four decades of apartheid. The demands will range from easing 45% unemployment, to overhauling a badly stunted school system, to upgrading entire black townships lacking even indoor plumbing and electricity. But the government will have to tread carefully so as not to frighten off the local businesses and foreign investors that are the best bets to help pay for the job. Managing these conflicting political and economic pressures will require deft work on the part of likely President Nelson Mandela and his key aides.

A PRO-ANC RALLY: PRESSURE TO SPEND MONEY ON JOBS, SCHOOLS, AND HOUSING WILL BE FIERCE

DEEP-SEATED. The ANC has already produced an economic blueprint with its allies in the Congress of South African Trade Unions. And it has sold the concept, if not all the details, to business. Indeed, the business community and the left-of-center ANC government-in-waiting are surprisingly close on the main points. "There's a deep-seated understanding among ANC economists that the main thing is growth," says Bobby Godsell, a director of Anglo American Corp., the country's largest conglomerate.

A consensus is already emerging among the two groups on the broad outlines of economic policy. These include central bank independence, fiscal discipline, trade liberalization, and the avoidance of tax hikes. That's a long way from the socialist pronouncements delivered by ANC leaders as they returned from exile and walked out of prison in 1990. But with the collapse of communism and the prospect of taking power growing more real, the ANC leaders grew more pragmatic. Talk of nati ization has given way to discussion easing the mining industry's tax bu if that will lead quickly to more The ANC "isn't going to nationalize thing," says Gouws. "They might privatize a thing or two." Some 30 South Africa's assets are in state h

At the same time, business le have come to accept that a new ernment will have to improve the living standards of the mostly poor. Now, the overall strategy more like contemporary Mexican-



erity than a 1960s-style Third World are state.

/hile the ANC has a "New Deal" plan a massive reconstruction program uild houses, electrify townships, and te jobs, leaders vow they can fund it in snug budgetary guidelines. Al-gh the price tag is put at $11 billion ıpital investment alone, planners in-that much of that money can be ·ezed from the "post-apartheid divi-l" —money redeployed from defense from duplicative apartheid bureau-·es. But ANC policymakers acknowl-edge that a lot of luck and even some "voodoo economics" will be needed to meet these targets.

A taste of the new austere tone came in mid-April, when Jay Naidoo, who will head up the reconstruction effort, told a group of educators that last year's budget of $6.5 billion for the country's entire education system was "more than enough money. Now, tell us how you can deliver a better product." As the former top leader of the militant trade union federation, the charismatic Naidoo is one of the new leaders who can credibly make such demands.

To be sure, the consensus is still fragile. It could be easily shattered by more violence. Continued conflict in Natal could sap precious resources. Says U. S. Ambassador to South Africa Princeton N. Lyman: "I would hate to see the new democracy spend more on security than on development."

PROWLING. Renewed violence would also scare off investors, exacerbating capital flight, estimated at $4.5 billion in 1993, and offsetting a healthy $5.4 billion trade surplus. In March, the decline in gold and foreign exchange reserves continued, as they dropped by more than 10%, to $2.25 billion.

What's more, the ANC is relying heavily on an inflow of funds to finance its ambitious plans to meet blacks' expectations for quick results. If those are not forthcoming, leaders will be pressured to finance their new program, called the Reconstruction & Development Program (RDP) through stiff tax increases or deficit spending, which would in turn further damage investor confidence. Warns Finance Minister Keys: "The RDP has to show it can help a lot of people. But it still must be responsible, otherwise confidence will be lost and there will be no growth."

So far, Americans are reserving judgment about South Africa's transition. Sanctions came off just as U. S. fund managers were prowling for high yields in emerging markets, and the Johannesburg Stock Exchange saw a brief boom last fall. But foreign buyers have

D EDUCATIONAL ELS ARE SKEWED

N°	UNIVERSITY EDUCATION
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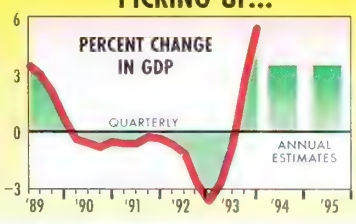
ND ABOVE

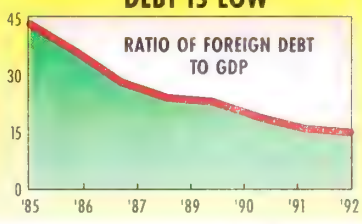
...BUT SOME ECONOMIC SIGNS ARE BRIGHTENING

DATA: RAND MERCHANT BANK

GROWTH IS FINALLY PICKING UP...



...AND FOREIGN DEBT IS LOW



become jittery in the tense weeks leading up to the election. And while such U.S. companies as Digital, Reebok, and Motorola have set up sales offices, few manufacturers are sinking capital into new factories. Still, Roger Crawford, president of the American Chamber of Commerce in South Africa and director of a big U.S. health-care company, says companies are starting to visit, "looking beyond the ups and downs."

While making supportive noises, Washington doesn't seem likely to cough up big money for the new South Africa. So far, plans are for $30 million in guaranteed loans for mortgages for low-income housing and the creation of a Southern Africa Enterprise Fund to seed small private ventures.

IN STEP. Fortunately for South Africa's new leaders, they are taking power as the country emerges from a crushing four-year recession. Most macroeconomic fundamentals are perking up. After years of drought, agricultural production is up for the second year, adding a percentage point to the gross domestic product, which is expected to grow by 3.5% this year. And with a world recovery getting under way, South Africa's nongold exports to its major trading partners were up 6% in 1993 over 1992.

As the handover approaches, South Africa has been gradually easing out of 25 decades of isolation and getting in step with the world economy. Recently, it signed onto the General Agreement on Tariffs & Trade, committed itself to the scrutiny of the International Monetary Fund, and applied to the U.S. for favorable trade treatment. A $400 million bond offering in the U.S., Europe, and Japan could be cinched before the end of 1994.

Planners are convinced, though, that an export-promotion strategy is key to growth. To that end, they have delved into studies of key industrial sectors with a view to fashioning a kind of industrial policy. One target for overhaul will be the highly protected auto industry.

TOWNSHIP VIOLENCE: CONTINUING CLASHES COULD SAP PRECIOUS RESOURCES AND SCARE OFF INVESTORS

As South Africa reopens to the world economy, its relatively high labor costs are likely to come under pressure, creating a serious political issue. The labor movement is a powerful force in South Africa. Years before the ANC was unbanned, the 1.5 million-member Cosatu engaged with business in consensus problem-solving on workplace issues. Although formally allied with the ANC, Cosatu won't want to see its members hurt. The potential for conflict could be eased by the fact that Cosatu and its affiliates will have close links with the new government: More than 20 of their senior officials are ANC election candidates.

Big business, too, is under pressure to adapt to the new era. Last month Anglo American announced plans to sell stock to black business worth more than $1 billion. The gold and industrial interests of its subsidiary, Johannesburg Consolidated Investments. Other large companies talk enthusiastically of subcontracting to small black businesses. And blacks are being promoted into senior posts. So far, union and ANC leaders aren't insisting on strict affirmative action quotas. But if companies are slow to change voluntarily, quotas could be imposed.

Still, it will take decades before the economic consequences of apartheid are eliminated. "Our people don't know the difference between cash flow and profit," says an official of the Get Ahead Foundation, which promotes small business development. There is also a vast chasm to be bridged between the new rulers and the public servants of the old regime on whom the new government will still depend. Says ANC economics chief Cial Mboweni, who has had dealings with some of the latter: "When we ask them to do something differently, they say 'Yes'. But then go off and do it the same old way."

For Rebecca Matlakala, a salesperson at Pick 'n' Pay supermarket, the issues are much simpler. She lives in a cramped three-room home with seven other family members in Alexandra, a crowded, crime-ridden black township on the outskirts of Johannesburg. "All I want is a three-bedroom house with indoor plumbing and some privacy," she says. Matlakala and millions of others will only have a shot at seeing such modest dreams fulfilled if the ANC and its partners continue to play their cards with skill and restraint.

By Elizabeth Weiner and Alan Fine in Johannesburg

POWER BROKERS IN THE NEW REGIME

JAY NAIDOO

CHRIS STALS

CYRIL RAMAPHOSA Likely to win the post of Deputy President. Front-runner in the ANC to eventually succeed Nelson Mandela.

THABO MBEKI Tops the list for Finance Minister. A moderate, he'll face populist pressure to spend on social programs.

CHRIS STALS Governor of the Reserve Bank and the country's most important technocrat. Has run a tight monetary ship since 1989 and will be retained by the ANC to reassure foreign investors.

JAY NAIDOO Skilled negotiator from the labor movement. He's in line for the key job of managing the Reconstruction & Development Program.

JOE SLOVO Former Communist Party head and best-known white ANC leader. Likely to get Justice or Police Ministry, where he'll need his radical credentials to bargain with ANC militants.

F.W. DE KLERK Former President is likely to get high-ranking ceremonial post in the new government as a display of national unity.

LASH AND EARN N THE CONTINENT

ope is competitive again, and this year looks like a winner

ne by one, the bosses of Europe's big companies are mounting podiums to announce their financial results. Few have a nce in their step. Last year was y bad," said a grim-faced Jean Gan-, chairman of French aluminum giant niney, who on Apr. 19 disclosed a million loss. The ink flowed even der at Daimler Benz, Michelin, ay, and dozens of other industrial ers. Moreover, the collapse of Ger-y's Schneider property developer is eading fears of new ibles for Europe's ks (page 48).

et the wave of bad s masks a happy re-: European indus-is on the mend after vorst battering since ld War II. Many panies are forecast-better bottom lines year. Much of the it increase will come n earlier cost-cut-. Beyond that, ks in large part to ng export demand, panies in just about y sector have en-d an upturn in re- weeks. After ng 0.6% in 1993, Eu-'s economy is start-a modest turn-nd, with growth ected to reach 1.3% year and 2.1% in

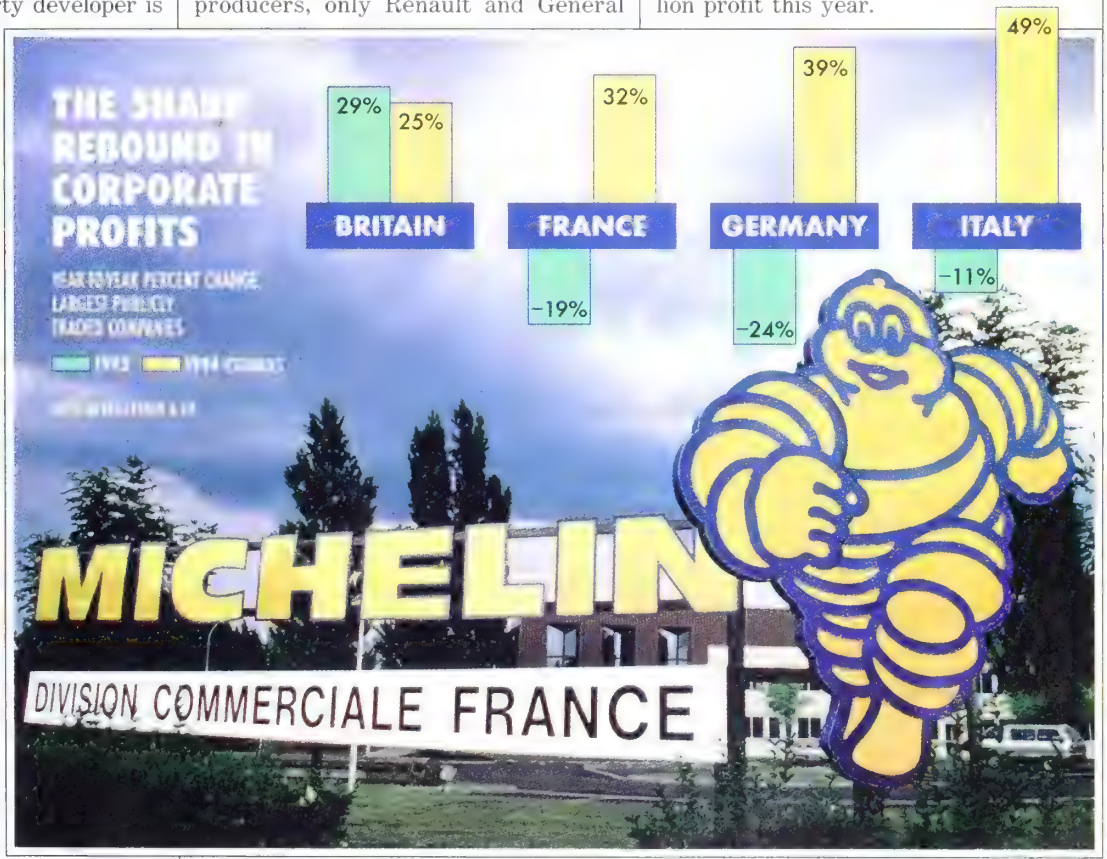
H YEN. That is far n what's needed to unemployment in ope, where a binge estructuring has pushed the jobless to 10.9%. However, the cost-cutting arting to pay off big for corporate rs (chart). In Germany, productivity p 6% in the past year with no th in wages. "We have a signifi-ly lower cost base," says Manfred eider, chairman of chemical giant er. After four years of steadily g profits, he hopes for a 20% jump year.

though the paring isn't over, Eu- is now emerging as a more serious petitor to the U.S. and Japan. Japanese auto makers that expected to move quickly into the European market "will be hard-pressed to make their [government-negotiated] quotas this year," says John K. Lawson, analyst at DRI/McGraw-Hill in London. European cars are cheaper—especially since the yen has risen 30% in the past 18 months against the ECU, a basket of European currencies.

Carmakers are poised for a profit turnaround. Of the six big European producers, only Renault and General Motors made money in 1993. This year, Peugeot should join their ranks. Mercedes-Benz and Saab also are likely to enter the black. Ford of Europe may break even, and losses should lessen at Volkswagen and Fiat, predicts Lawson.

Governments worried about jobs are helping. On Apr. 12, Spain cut its car tax by $700 for consumers who junk a 10-year-old vehicle. That, plus a $900 French government rebate, will help boost Europe's auto sales this year by 300,000 cars, say industry executives. Michelin will likely earn $200 million or more this year, compared with a $625 million loss in 1993. Other auto suppliers, such as Pirelli and Valeo, also expect a better year.

NO NEW JOBS. European exporters are getting a boost from the U.S. and Asia. On Apr. 18, Alsthom clinched a $2.1 billion contract for a South Korean high-speed train system. Europe's steelmakers are boosting shipments to the U.S.—despite dumping duties imposed last year—because American producers are nearing capacity. Analysts say strong exports and rising prices will lead to vigorous profit upturns in chemicals, metals, building materials, and paper. Belgian chemical producer Solvay thinks overseas demand for its plastics—along with its 9% workforce reduction in the past two years—will help it turn a 1993 loss of $197 million into a $106 million profit this year.



GOING STRONG: METALS, PAPER, CHEMICALS, AND AUTO SUPPLIES

Although bourses are down so far this year, the cheerier outlook for industry spells stronger markets ahead, many experts believe. "Lots of stocks that look fully valued now will seem less so when earnings come out," says Mike Young, director of European investment strategy for Merrill Lynch & Co.

Not all companies face a quick upturn, however. The main laggards will be those that depend on Old World markets, especially in consumer goods. "Consumer confidence remains depressed,"

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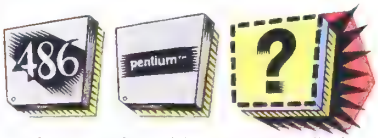

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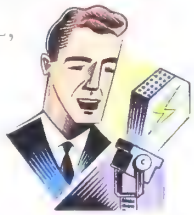

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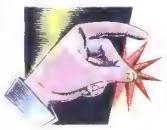

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says Anthony Greener, chairman of Britain's Guinness PLC. "Our prospects will be constrained until it improves." He expects only "modestly" better profit this year, mainly from cost-cutting.

Consumer worry isn't surprising, given stubborn unemployment that probably hasn't peaked yet. Economist Jürgen Pfister at Germany's Commerzbank thinks workers can't hope for much new hiring until late next year. Banks, too, should find little cheer this year. Customer bankruptcies—which typically mount as recessions climax—may produce weighty reserves for bad loans.

Still, most of Europe's beleaguered companies see a brighter year before them. "Now our head is above water," says Cesare Romiti, chief executive of Fiat, which lost less money than expected in the first quarter. That's hardly a rousing recovery. Still, it's the kind of news European business has been craving for a long time.

By Stewart Toy in Paris, with J... Flynn in London, Patrick Oster in B... sels, and bureau reports

EUROPE

WHAT SCHNEIDER LEFT BEHIND

A real estate tycoon bolts—and the ensuing scandal has Germany reeling

As someone who looked like a risky bet, Jürgen Schneider could have stepped straight out of Hollywood central casting. The guy swiftly parlays a small grubstake into a multibillion-dollar real estate empire. He lives in a castle, drives a bulletproof car, and sports an obvious toupee. Worse, he is regularly sued by subcontractors for not paying his bills. So when Schneider disappeared, leaving more than $3 billion in debts, you've got to wonder why no one saw it coming.

That's the question haunting executives at such giants as Deutsche Bank. But a bigger question looms: What other problems are lurking in the loan portfolios of Germany's banks?

The managers of those portfolios aren't saying. And Germany has no equivalent of Canary Wharf, the huge London development whose public struggles foreshadowed Britain's real estate bust. But the signs are accumulating that Germany may be headed for its own version of a real estate bubble—not the kind that shook Britain, Japan, or the U. S., but one with troubling implications nonetheless. Says Manfred Piontke, bank analyst at Bank Julius Bär, "[Schneider's] bankruptcy is not the last one."

A SCHNEIDER PROPERTY IN FRANKFURT: HE OWES $3 BILLION

NOT NORMAL. Schneider's collapse occurred as other German businesses were struggling. In January, bankruptcies of all kinds were up 22.8% from the year before in western Germany and 99.2% in eastern Germany. Such conditions don't bode well for real estate. In Frankfurt at the end of 1993, prime office space was going for $44 a month per square meter, down from $55 in 1991. In Leipzig, rents were 44% lower than in 1991.

Germany's conservative banking system is supposed to discourage overbuilding. Bank lending to commercial developers is only 2% to 3% of total lending, compared with some 12% in Britain just before the real estate crisis in 1989.

But these have not been normal times in Germany. After reunification, newly devised tax breaks for building and renovating in the eastern sector sparked a flurry of building, much of it ill-conceived. The relative freedom of some German banks to make loans also fueled the building boom. German mortgage banks cannot lend more than 50% of the market value of a property. But commercial banks are not so limited: Some lent at 80% to 120% of the market values of properties. "Why be skeptical if you have collateral for what you lend?" adds Ulrich Ramm, executive vice-president at Commerzbank, which has $76.5 million in loans to Schneider.

Yet estimating real estate values can be tricky when the rent potential ... development changes dramatically. "V... often, [the banks'] assessments did ... reflect swift movements in the mark... says Jeremy B. Stewardson of inter... tional property consultants Jones L... Wootton. Bank profits in Germany co... suffer this year if more developers ... fault on loans based on the exaggera... rent potential of properties.

It's unclear how diligent the ba... were in sniffing out potential proble... Schneider, for example, may have o... stated the rents he expected to cha... thus qualifying for higher loans. Ye... kept getting funded. "German ba... have had such a good record that ... rather embarrassing," says Matt... Czepliewicz, European bank analys... CS First Boston in London. "You hav... wonder whether Deutsche Bank k... where the ultimate liability w... Deutsche Bank, which has $700 mi... in loans outstandin... Schneider, accuses ... contractor of fraud.

While the banl... wonder which o... clients will embar... them, the politicians ... bracing for the poli... fallout of the Schne... affair. Chancellor ... mut Kohl has u... banks to reimburse ... hundreds of subcon... tors whom Schne... had not paid—a ... move to prevent t... sands of layoffs du... election season.

But Kohl cannot ... pair all the poli... damage in the ... where ordinary citi... are disgusted with continued ineq... ties and pockets of staggering u... ployment. "There's a huge loss of tr... says Reinhard Buhl, a lawyer re... senting 200 mostly eastern building ... structors, who has fought Schneid... court more than a dozen times for ... payments. "They see Schneider an... lieve capitalist Westerners are all fr... who don't fulfill promises." Schnei... legacy could be a lot worse than ... empty buildings.

By Karen Lowry Miller in Bonn, ... Deborah Wise in Berlin

EDITED BY STANLEY REED

ET SET FOR 'ARZAN' OF THE TORIES

's a comeback to rival that of Lazarus. Michael Heseltine, Britain's Trade & Industry Minister and the man who brought down Margaret Thatcher in 1990, is again the ing contender to be Prime Minister if, as widely expected, hapless John Major leaves office. In the event that Hes-ıe replaces his friend at No. 10 Downing Street, there d be lasting consequences for Britain's position in the opean Union. It would also give British industry a re-ted spokesman in world markets and might even bring ility to capital markets, which suspect that Major's gov-nent recently cut interest rates to st its flagging popularity.

lmost all pundits agree a leadership nge is coming. Major can't be forced until November, when a new ses- of Parliament begins. But he may gn as early as July to avoid a bitter est. At least, that's what the key ers seem to think. Heseltine, to-er with Chancellor of the Exchequer neth Clarke and Treasury Secretary nael Portillo, is already running an fficial campaign in the media and in l party back offices.

LKED OUT. Pollsters say Heseltine has ntly emerged as the only serious candidate. "The public's up with John Major, and Heseltine is the only star that's ng," says Robert M. Worcester, a Market & Opinion Re-ch International pollster.

millionaire publisher who was Environment Minister Defense Minister under Thatcher, Heseltine stalked out of cabinet in 1986 and then engineered her fall four years lat-Thatcher made sure he didn't replace her. But Major ıe Heseltine to head Trade & Industry, where he has kudos from business. Better cooperation between business government in finding new export markets will be a eltine trademark, if he's elevated.

HESELTINE: STAUNCHLY PRO-EUROPE

Widely viewed as the most pro-Europe member of the Cabinet, Heseltine has lately been bashing Brussels to placate the right wing of the party. But one friend says: "He hasn't changed his stripes. He's as pro-Europe as ever." He'll probably make Britain more of a team player in European affairs—turf he must tread carefully, since British voters remain wary of European meddling.

RESURRECTED. Just six months ago, Heseltine seemed to be finished. He committed a political blunder in proposing to shut down what's left of the coal industry, thereby threatening the jobs of thousands of miners in the midst of a recession. Last summer, he suffered a heart attack while on holiday in Venice, and many wrote his political obituary at the time. But at 61, and with a full shock of hair that has earned him the nickname Tarzan, Heseltine is back as a force and now seems accepted, if not forgiven, even by Thatcherites.

Meanwhile, Major is trying to hang tough, hoping that Britain's being No. 1 in Europe in economic growth will save his hide. Yet the Conservatives will likely take a drubbing in local elections on May 5 and in European Parliament elections on June 9, and these may be Major's undoing. The Conservative Party is so unpopular that only 27% of voters say they would vote Tory today. Why? The recovery still doesn't feel like one: 46% of all voters worry about losing a job soon.

Major's not the only one in the doghouse. Most European politicians are mistrusted today—as workers grumble over the slow pace of recovery and the steady loss of jobs to cheaper-labor countries. Voters are turning away from incumbent politicians in France, Germany, Italy, and elsewhere. For now, it seems British voters have an alternative in Heseltine—but it's a fickle electorate he's playing to.

By Paula Dwyer in London

BAL WRAPUP

ANCE REJOINS NATO

rance made big news in the mid-'60s, when President Charles de ılle took French troops out of the ımand structure of the North At-tic Treaty Organization in a bid for re independence. In the past few nths, however, France has quietly n putting them back. French war-ıes, answerable to a NATO comman-, are among those in line to make ıbing runs over Bosnia.

'art of this unannounced switch ns from France's experience in the sian Gulf war, when French troops)peration Desert Storm put them-'es under U. S. command after they found their own logistics and intelligence capabilities were inadequate. But what sealed the change was U. S. agreement at the January NATO summit to let the European Union's defense arm use NATO's assets, in exchange for closer French military ties with the alliance.

BERMUDA STOCK EXCHANGE

Attempting to capitalize on its standing as a major tax haven and center for offshore corporations, Bermuda is laying plans for an international stock exchange to be open 24 hours a day.

Bermuda's current bourse lists a handful of local companies, but Cummings Zuill, a bank executive and chairman of the Bermuda International Business Assn., says the new exchange might initially seek to attract some of the several hundred Hong Kong companies—including giant Jardine Matheson Holdings Ltd.—that have switched their legal domicile to Bermuda in anticipation of Beijing's 1997 takeover of the colony. Reflecting Bermuda's long-time preference for industry self-regulation over government control, Zuill says the exchange would "take the best" securities rules while "leaving off the worst controls and practices" that sometimes hamper trading on other markets. The exchange could begin trading as early as 1995.

JAVIER SMITH FOR GAMMA, BBDO

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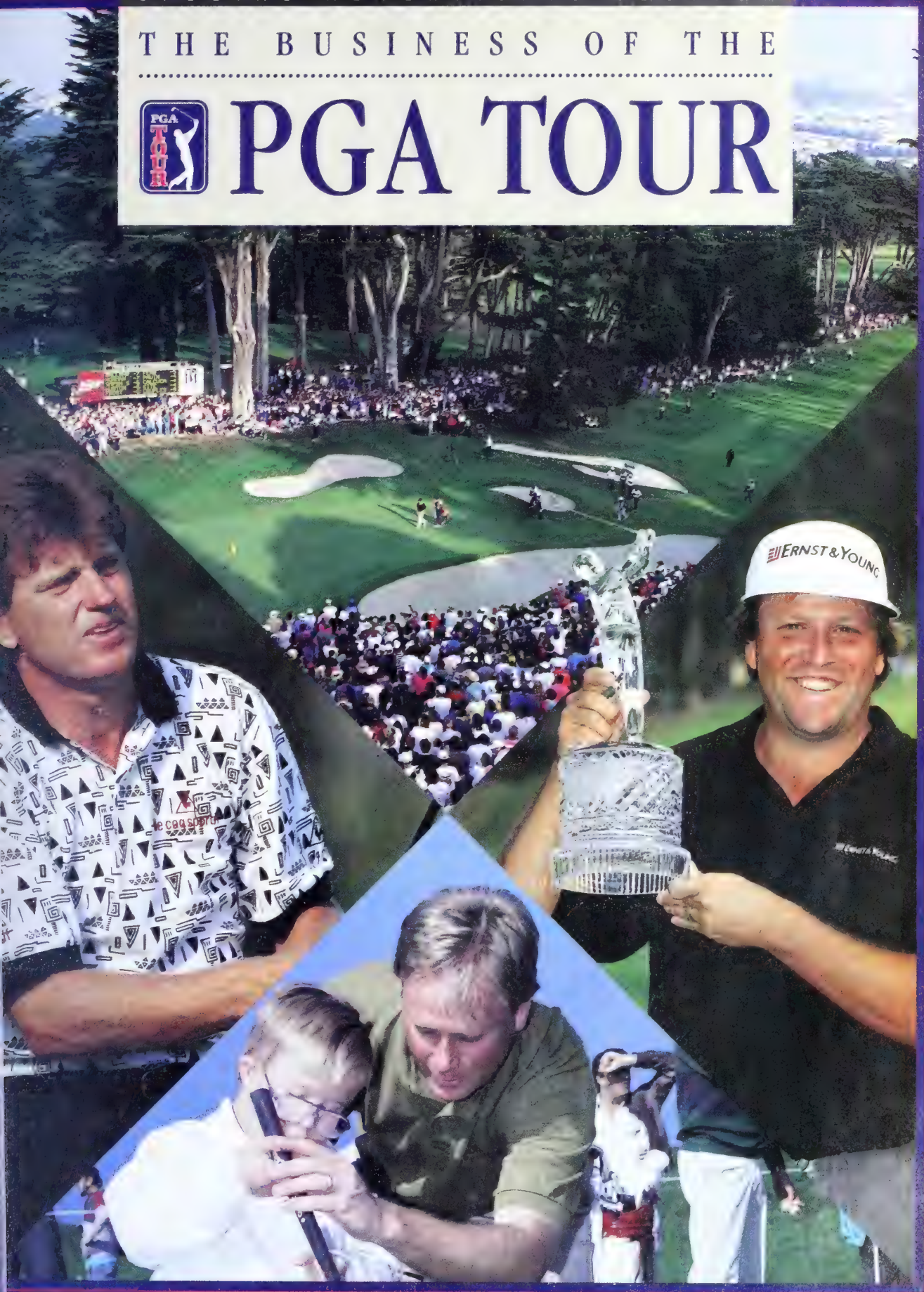
THE BUSINESS OF THE

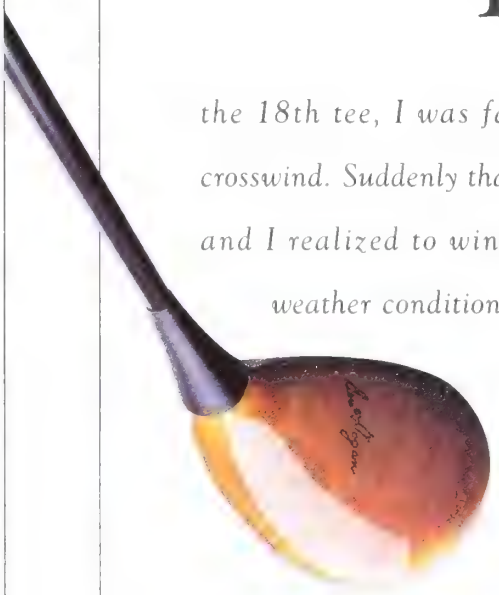
PGA TOUR



"The big one, the one I'll never forget was on the 18th hole at Pebble Beach during t
final round of the 1992 U.S. Open. The course was set up in typical U.S. Open fashion–narr
fairways, high rough and hard, fast greens. Although I had a two-stroke lead standing

"Two of my most

the 18th tee, I was facing the Pacific Ocean on the left with a 30-mile-per-ho
crosswind. Suddenly that lead didn't feel so comfortable. The 18th is a 548-yard par f
and I realized to win the Open, I had to have a par. No small trick under th
weather conditions. The previous three rounds I'd played it conservatively, usin
3 wood off the tee. But that day I needed more.



So, I told my caddie to give me the driver. I thought he was going to argue with me, but all he said was: "I like it." So, I took my driver and hit what my caddie later called the best drive of the tournament. A drive so gorgeous, you don't even have to watch where the ball lands. You just pick up the tee and start walking. It was well over 280 yards, straight down the middle. I got my par and became the 1992 U.S. Open Champion."

USA OFFICIAL SPONSOR OF THE 1992 U.S. OLYMPIC TEAM

was driving Chrysler products long before I had any professional association with the ysler Corporation. My wife and I discovered their minivans years ago. (With three lren, including twin boys, it was a fortunate discovery.) We've owned three Chrysler vans including our current one: the Plymouth Voyager. I also own a Chrysler Concorde, h I will admit, I didn't pay for. I won it in the Bob Hope Chrysler Classic. Recently, the at Chrysler let me drive the new LHS; they wanted to know what I thought. The LHS larger car than my Concorde, but it's unbelievably quick and agile. It's got acres of front and back and is equipped with every luxury feature I can imagine a car having. the thing I admire most is the simplicity of the lines. There's nothing busy or extraneous t this car, inside or out. Yet it feels rich and luxurious. In my mind, that's good design.

norable drives."

–*Tom Kite*

ve a chance to drive a lot of new cars in the course of a year. Every tournament provides layers with a courtesy car–both imports and domestics. Overall, the domestic ufacturers have come a long way. But y book, the company to catch is Chrysler."

CHRYSLER

Charity

BY CHRIS SMITH

The start of every golf season inevitably promises not only new standards in quality of play, but in quality of life for the thousands who will be touched by the PGA TOUR's charitable arm.

For the value of the TOUR is not confined to competition and entertainment. It extends well beyond specific dates and community boundaries. Whether it is Los Angeles, New Orleans or Endicott, NY, the PGA TOUR annually provides immeasurable assistance to all walks of life, without prejudice to race, sex, age, belief or background.

Dollars raised at PGA TOUR events have helped build medical facilities and provide college education for inner-city youth.

Since the first $10,000 was raised through the 1938 Palm Beach Invitational, dollars generated through PGA TOUR events have helped build medical facilities and provide college education for inner-city youth. They have offered young drug and alcohol addicts a second chance and prematur babies a chance at life. They have helped victims of natural disasters and victims of broken homes. They have helped improve the environment and living conditions for the poor.

Greg Cesario and Davis Love III lend a helping hand at the St. Jude Children's Research Hospital.

Be it a national organization like Special Olympics, American Cancer Society, Fellowship of Christian Athletes and Cerebral Palsy, or a local charity like Mom's House for single parents, Opportunity Village for Retarded Children and Arrowhead Ranch for boys, the TOUR has been ther

By 1950, contributions totaled $1 million. By 1960, they reached $5 million. But it is the efforts within the past two decades that truly have been remarkable. More than $22.75 million was distribut ed to charities in 1993 alone. Tha brings to nearly $216.3 million

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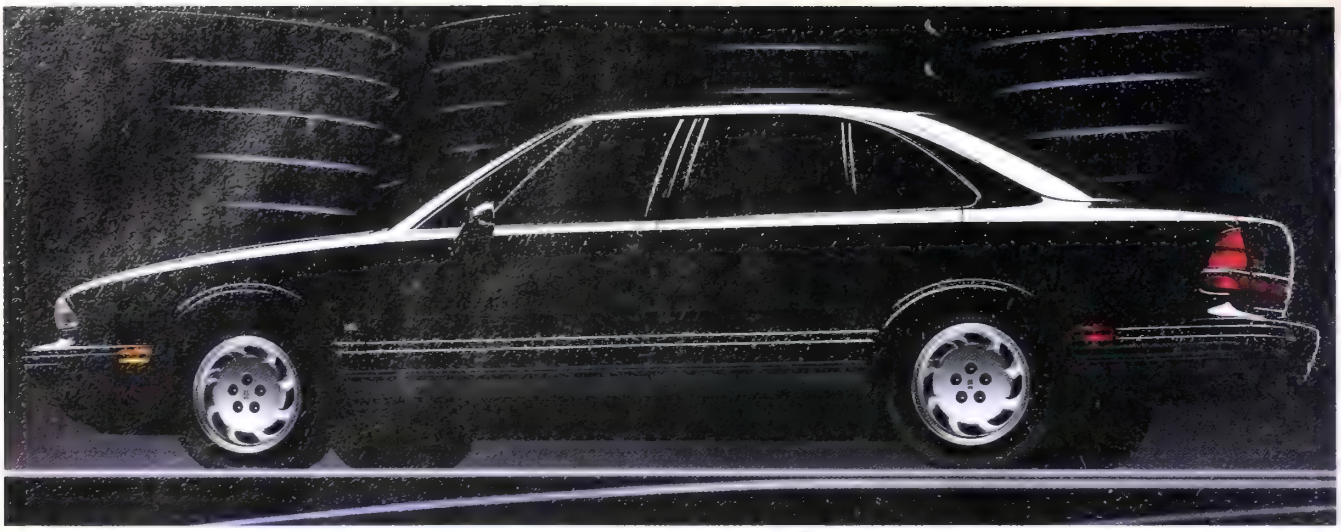

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total raised since 1977, when the American
lf Sponsors first started keeping accurate records.
The noticeable growth since the mid-1980s
ncides not only with the general popularity of
f and the PGA TOUR, but the nurturing of
e sponsorship.

"I know commercialization of the game is
netimes portrayed in a negative light," says
Monday, executive director for the American
lf Sponsors. "But without that, the level of chari-
le dollars would not be nearly what they are."

Another record season is well underway. Of
rse, it doesn't just happen. It takes a cooperative
rt, a partnership between the TOUR, sponsors,
mmunities and, certainly, the estimated 52,000
unteers.

Typically, each tournament establishes its own
delines for distribution. Many annually focus on
imary beneficiary, as the Federal
ress St. Jude Classic has with St.
e Children's Research Hospital,
GTE Byron Nelson Classic with
Salesmanship Club Youth and
nily Centers, the Bob Hope
rysler Classic with Eisenhower
dical Center and the Motorola
stern Open with the Evans
olarship Fund.

Others have a broader agenda.
e MCI Heritage Classic at
ton Head Island, SC, for
ance, has contributed to 86 char-
s throughout South Carolina,
uding the Children's Hospital
he Medical University of South
olina and the Hurricane Hugo
ief Fund.

Though total contributions are dictated by
ket size and other factors, the 47 tournaments
etheless are bonded by a common cause.

"We are able to make all the local communities
tter place for everyone," says Eric Fredricksen,
l of the Houston Golf Association. "We are all
ed together by charity, which is the uniqueness
ur sport. We all take a great deal of pride
and strive to keep the numbers growing."

f it is important to lead by example, the
A TOUR certainly has done so through its
PLAYERS Championship and TOUR
mpionship.

Since Ponte Vedra Beach, FL became permanent home to THE PLAYERS Championship in 1977, the tournament has generated $6.1 million in charitable dollars.

The most visible project directly attributable to THE PLAYERS Championship is the Nancy Reagan TPC Village in Jacksonville, a residential facility for adolescent alcohol and drug rehabilitation that opened in 1989. Money first was earmarked for the project in 1986, and it since has received $1.4 million, including an original $1 million for building and outfitting the facility. It continues to receive yearly grants – $100,000 from the 1993 tournament – to keep it operational.

But that is just one of many First Coast organizations reaping the charitable benefits of THE PLAYERS Championship. In fact, 58 other organizations were earmarked to receive between $1,000 and nearly $68,000 from the $462,000 raised in 1993.

Last year, more than $22.75 million was distributed to charitable organizations by PGA TOUR events.

The GTE Byron Nelson Classic proudly stands at the forefront of fund-raising, generating more than $15 million over the past five years for its sole benefactor, the Salesmanship Club Youth and Family Centers. The Salesmanship Club is governing body for both the tournament and charity, which helps youths with severe emotional and behavioral problems. The centers annually serve about 2,400 individuals.

"Over the years, we have found we need to be involved with the families," says 1994 tournament

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CIGNA

A Business of Caring.

chairman Plack Carr, Jr. "While we can take the child and do some pretty good things, in order for us to have a good long-term impact, we have also worked through family therapy, working with the family as a unit."

Down the road, the Shell Houston Open also has concentrated on helping youth in the distribution of its record $500,000 from 1993. Among its ongoing beneficiaries is the Chinquapin School,

With the help of sponsors, volunteers and players such as Rick Fehr (above), the PGA TOUR has contributed approximately $2.5 million to local charities since its debut in 1971.

a unique operation that was named PGA TOUR Charity of the Year for 1993. Founded in 1976, it is a college preparatory school for inner-city youth. The Houston Golf Association, which runs the Open, has been its primary supporter from the outset, providing funds to help build the campus and meeting a wish list of necessities.

As prominent as education is among charities, so, too, is health care. One prime example is the Eisenhower Medical Center in Rancho Mirage, CA.

The Hope Classic, contributes to about 40 charities per year, but primarily is associated with the Eisenhower Center, and for good reason. When first introduced as the Palm Springs Golf Classic in 1960, the tournament's mission was to raise funds for a major medical facility in the Coachella Valley. The tournament has raised nearly $24.65 million and of that, more than $17 million has gone to the Eisenhower Center. Contributions go to the general fund, from which it is distributed to such branches as the renowned Betty Ford Center for treatment of alcohol and drug abuse, the Barbara Sinatra Children's Center for treatment of sexual and physical abuse and the new Birthing Center for maternity and prenatal care.

"The Bob Hope Chrysler Classic has been the single most important factor in the founding and growth of Eisenhower Medical Center," says Albert Mour, president of the facility's Board of Trustees.

There are a number of wonderful stories regarding PGA TOUR events and how they have benefited charitable organizations over the years. And the beauty is that success isn't dictated by market size. One of the most lasting and popular successes involves the B.C. Open in Endicott. Despite the lack of title sponsorship, the tournament has contributed approximately $2.5 million to local charities since its debut in 1971, concentrating primarily on health-related, cultural and educational activities.

"We aren't the biggest event on TOUR and the dollars we raise, we work hard for," says tournament founder and director Alex Alexande "But we started charitable giving since Day One. And this community has accepted and supported us. It is theirs."

"We have made a difference," Alexander proudly states.

Which, in the charitable sense, makes the B.C. Open every bit as important as any other tournament on the PGA TOUR. For no matter how larg or how small, they all have made a significant difference in the lives of thousands.

Two years ago, B.C. Open beneficiary United Health Services System was named the PGA TOUR's charity of the year. Most money generate by the tournament, including $55,000 in 1993, has gone to the hospital for prenatal care.

"It has gone toward the purchase of equipment in the prenatal care unit, such as respirators and ventilators for premature babies," Alexander say: "It's amazing to see. You can hold one of these children in the palm of your hand." ■

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A Winning Sponsor

BY JACK BERRY

Buick is the oldest title sponsor on the PGA TOUR, all the way back to 1958 when fins were in. But it's only been since 1986 that the General Motors division decided to focus its sports marketing effort on golf.

The decision led Buick to add three geographically and calendar-separated tournaments to the original mid-summer model Buick Open in Grand Blanc, MI, just south of the company headquarters in Flint.

The Buick Classic in Westchester, NY and the Buick Southern Open in Callaway Gardens, GA were added in 1990 and the Buick Invitational of California completed the line in 1992.

Buick has added so many options to the standard equipment that Rich Brochu, in charge of golf activities for the Sales Promotion Department, said golf occupies almost his total time year-round.

The Buick Southern Open has generated dealer-sponsored "Little Buick Southern Opens" in Georgia, Alabama and Florida with an average 125 amateurs in each event, and Brochu said "more than 110" Little Buicks were held in the southeast last year. The four-man best-ball tournaments produce money for local charities, and the winners go to a regional competition in Panama City, FL. The winning team there gets a spot in the Buick Southern Open Pro-Am at Callaway Gardens Resort. In addition, there's a competition for club professionals with two sponsor's exemptions into the Buick Southern field.

Buick also is involved in the growing NIKE TOUR, the PGA TOUR's "development league." Buick will participate in 16 of the 30 NIKE tournaments this year, either through individual dealers or zone offices.

Buick is the Official Car of the PGA TOUR and provides cars for officials at TOUR headquarters in Ponte Vedra, FL, as well as the field staff at all TOUR stops, including those where the title sponsor is a different automobile company.

Larry Mize and his wife, enjoying a triumphant moment

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Sponsorship at PGA TOUR tournaments is a natural for Buick, a car company that's been a golf product

Buick runs a $1 million sweepstakes, and winners have received the same prize money as the pro who wins the Buick Open. The company sends up to five million direct-mail pieces to prospective buyers and offers a three-ball sleeve of Buick-logoed golf balls for visiting a dealer and taking a test drive. Buick purchased 85,000 dozen balls last year and went through nearly all of them. That's more than one million golf balls and a lot of test drives.

And, through its four PGA TOUR tournaments, Buick has produced $8.1 million for charities in the areas that sponsor the tournaments. The charities include Easter Seals, the Red Cross, children's centers and hospitals. The charities provide volunteer help and ticket sales at the tournaments.

The Buick Classic in Westchester has turned over $5.3 million since 1990 and the Buick Open $2.2 million since 1982. The Buick Invitational of California produced $404,000 in its first two years under Buick sponsorship and the Buick Southern $192,000 since 1990.

And what does Buick get out of golf?

"We get three distinct things," said General Sales and Service Manager Robert E. Coletta. "We get recognition in the community, we get recognition by some very important charities and we get car sales.

"We don't try to count the sales (Buick's annual sales consistently range between 500,000 and 600,000 cars). We do know we have the right in that community to say Buick sponsors this charitable event in your part of the world, and we'd like you to consider our products. By being a sponsor, it gives us the right to do that without infringing on people's privacy, if you will," Coletta said.

Golf started as a hometown public relations event for Buick, the division's contribution to General Motors' 50th anniversary celebration in 1958. Admission to the first Buick Open was $1 and parking was free. It was a big company picnic.

Jerry Rideout, longtime Buick public relations director and tournament chairman, imported Hollywood celebrities and Buick dealers from around the country for the pro-am. The $52,000 tournament purse was double the average at the time. Billy Casper won and wondered where they'd get all that money to pay the pros. Casper's cut was $9,000 and a Buick.

"As time went on, we got into a lot of sports," Coletta said. "In 1986, we sponsored golf, fishing, tennis, motor sports and the NFL. We were the Official Car of this and that baseball team.

"We spent a lot of money, but we couldn't seem to focus on any one sport. Jack DeCou (public relations director) and I came into our jobs about the same time, and we had to make some pretty big-buck decisions without a lot of background.

"The TOUR wanted us to move the tournament out of Flint, but we felt we owed it to Buick and Flint to stay. That's what got us going to get in and do it right, not treat it as just a public relations effort for the city. We weren't using the tournament to leverage our sales promotion and other activities.

"When we got over that, we said it never would happen to us again," Coletta said. "We were going to know who we were and what we were about. We did a very extensive demographic survey. We wanted to know who Buick owners were what sports they watched, participated in and supported.

"The answer came back loud and strong: Golf was No. 1.

"We got together and said we're already in golf with the Buick Open, and we were known for it, so why not divest ourselves of the other activities as the contracts expired and move more toward golf.

"We knew we had golfers all over the United States, and we looked toward adding tournaments as they became available. Westchester opened up first and that became the Buick Classic in 1990," Coletta said.

It positioned Buick in the important metropolitan New York area and the tournament at Westchester Country Club, played the week before the United States Open, regularly draws one of the marquee fields of the year.

"Then our dealers in Georgia asked if we would support the Southern Open that was played in Columbus, GA. That became the Buick Southern Open in 1990 and it's been moved to the Callaway Gardens Resort near Atlanta. It has turned into a big, big participation tournament for our dealers in the southeast.

Tom Watson with the Buick Open trophy

"We knew we wanted to get on the West Coast and had a lot of options but we wanted something that d 'California.'"

"The Buick Invitational of California (at Torrey Pines in Diego) completed our package, and just as important, inished our calendar year. Now we go from February ough the end of September-first week of October.

"This is exciting," Coletta said. "e have something to do starting in ruary and continuing through the r. Each tournament has a particular son for existence and all support main strategy of a sport that is yed and watched on television by demographic group.

"We introduced our new Riviera he North American International o Show in January and in February, had 16 commercials during the cast of the Buick Invitational."

The Riviera is just one of Buick's dels, however, and while the r TOUR tournaments are the jor component of the company's olvement with golf, the add-ons ke a well-rounded package.

Buick supplies courtesy cars at all r of its TOUR stops, and the cars n are sold through the local dealer work.

"Different approaches work in ferent sections of the country," etta said, pointing to dealer tie-ins with the NIKE UR and a hole-in-one insurance program that covered 00 events last year.

Volunteer help is provided by local charities at Buick sponsored events

Golf has turned the key for Buick for more than 30 years.

"As a dealer, I always thought the tournament was good business," said Al Serra, a member at Warwick Hills e 1973, a past president of the club and Assistant Director he Buick Open for many years. Serra is partner in a ck dealership in Grand Rapids, MI, and is owner of evrolet dealership in Grand Blanc.

I don't know that everyone at Buick agreed that it was d for business when they first went into it," Serra said. e thought was the tournament came at the end of the iel year so they didn't have anything to sell.

But the demographics showed their customers were golf usiasts and if you don't move the product today, you'll e it somewhere down the road. The whole thing fits well," Serra said. ■

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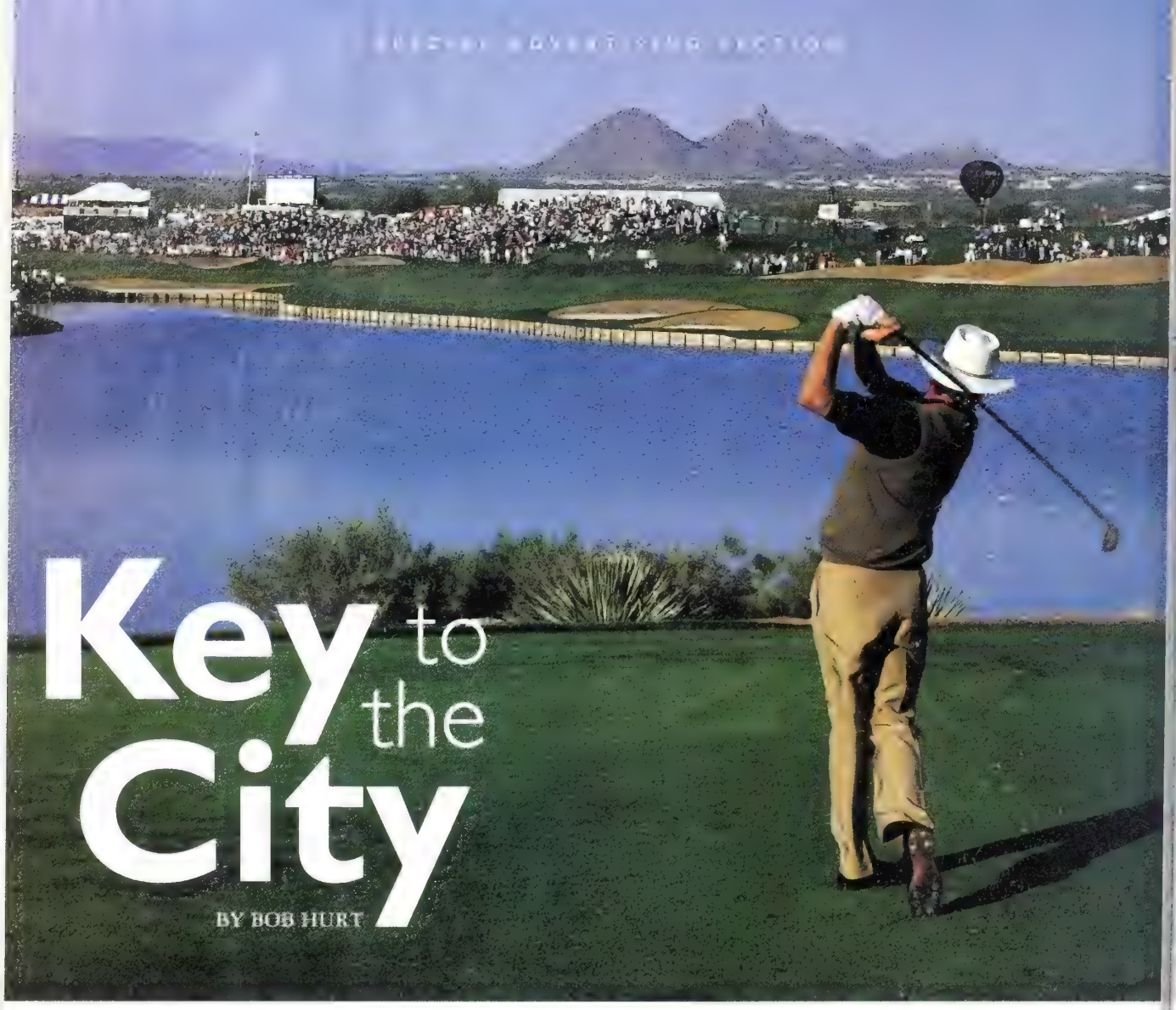


Key to the City

BY BOB HURT

The 18th hole at the TPC of Scottsdale.

Herb Drinkwater, mayor of Scottsdale, AZ since 1980, checked into a London hotel two years ago, weary after a trans-oceanic flight. He wanted to sleep but couldn't. He flipped on the telly, prepared to be bored into a nap by the British Broadcasting Company. Instead, he was startled.

"I'm in England, for God's sake, and the BBC has done this great 28-minute thing on the Phoenix Open," Drinkwater said.

The Phoenix Open now is in Scottsdale. Strange? Maybe, but what's in a name? Drinkwater owns a liquor store.

And Drinkwater doesn't play golf but he ramrodded a multi-faceted deal to build the Tournament Players Club of Scottsdale. This two-course public complex accommodates 120,000 rounds of golf annually and more than 300,000 spectators each January for the Phoenix Open.

That it is an artistic success is no surprise. That it has worked out well financially for everyone involved is. This was a complicated deal involving the city, an arm of the Phoenix Chamber of Commerce, the PGA TOUR, a hotel, a private land owner and the federal government.

"This is one of those rare opportunities in which everyone involved is a winner," said Deane Beman, Commissioner of the PGA TOUR. "It worked for everybody. And this is i the face of other sports that come into the cities and hold them up."

Back to Drinkwater in his London hotel room. Not unti he saw the BBC documentary did he fully appreciate the impact of TPC of Scottsdale and the golf event it hosts.

As he sat there watching, Drinkwater's thoughts returne to the start of the project on a hot August day in 1980.

Drinkwater loves the desert. It gave him life. He came to Scottsdale as an asthmatic child who had been told he would not live a year longer if he stayed in New York State

It was on a horseback ride in north Scottsdale that he came upon a barren, trash-filled hunk of desert. It was tucked behind a high ridge bordering a new irrigation

al. The land was covered with cactus, discarded refrigera-
and the remains of wrecked cars. Motorcyclists used it
informal races. Shooters used it for unauthorized target
ctice.

At the time, a government crew was clearing weeds,
ch represented a fire hazard.

The land was designated as a flood plain. The Bureau
Reclamation, it developed, was spending more than
0,000 a year to maintain it. On that 110-degree day
August, Drinkwater lured two Bureau of Reclamation
guls from Washington to walk that land with him.

"It was a dirty trick," he said. "Those guys thought they
e dying and going to hell."

The officials that day in 1980 acknowledged the proper-
vas a liability, and agreed to lease it for no charge for 99
s if Scottsdale would take over the maintenance. It was
gnated for recreation use. Non-golfer Drinkwater envi-
ed two golf courses and an equestrian center there.

A private equestrian center was
eloped earlier. Golf took longer.

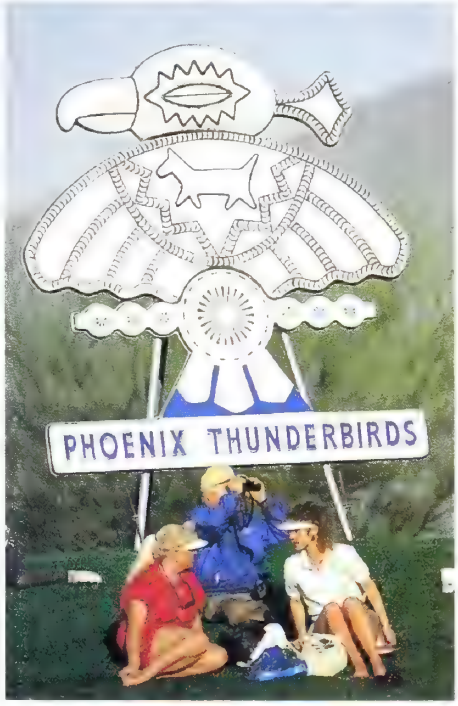
For years, the Phoenix Open was
d at the Phoenix Country Club,
ozy downtown course which
red to golf-for-lunch spectators.
ad a charm of its own, but did
fit Beman's dream of Stadium
rses, in which the fans by the
usands could see the winning
t just as the baseball fan can see
winning home run or football
can see the winning touchdown.

The dream became a reality in
0 at Ponte Vedra, FL, site of the
UR offices and its first Stadium
rse, TPC at Sawgrass. Now there
21 such courses in 12 states and
e countries.

Officials of the Thunderbirds,
rm of the Phoenix Chamber of
mmerce and sponsors of the Phoenix Open, visited
grass in 1980 and committed to a Stadium Course. Two
enix locations were considered. The favored northern
stirred up both the environmentalists and the horse
ole.

As the heat grew, the Phoenix politicians wavered. When
leal collapsed, Beman is reported to have said, "I will
r, ever deal with another municipality as long as I live."
lever translated into about a month, when Drinkwater
oached Beman.

he commissioner recalls the mayor looking him in the



The Phoenix Thunderbirds agreed to build a Stadium Course in 1980.

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An average of 346,876 fans attended the Phoenix Open at Scottsdale for the past eight years.

eyes and saying, "I am committed to this thing, and we'll do what we say we'll do."

Beman was impressed. He liked the mayor. Before the first meeting was over, they shook hands on the deal.

It helped that the leased land was already nailed down and that Scottsdale had prior approval to issue $16 million in bonds to build the course.

Vernon Kelly, who oversees all the TPC developments for the TOUR, kept putting a pencil to the bonds, which were to be retired by the course in 20 years. It didn't add. More revenue was needed.

"We came up with the idea that a hotel could pay a ground lease for land adjacent to the golf course and put play on the golf course," he recalls. "Between the lease and the extra play, the numbers did pencil out."

To get a hotel, Scottsdale advertised and received 20 replies. The Princess chain ultimately was picked for a lovely course-side facility, which also is the site of a major pro tennis tournament.

Hurdles continued to pop up. The land leased from the federal government was designated as a flood plain and was not supposed to have permanent structures on it.

At that point, a Scottsdale city councilman, Bill Walton, convinced a wealthy businessman to help. Kemper Marley owned much of the land adjacent to the course. Marley donated 30 acres on which to put the hotel and two acres for the clubhouse. And the land he retained zoomed upwards in value as sites for housing and commercial development.

Which is how it went with the development. Everybody who touched it came out better financially.

As a Phoenix booster group, the Thunderbirds had several members irate at the thought of moving the tournament to Scottsdale.

Drinkwater may have healed a few wounds by insisting the tournament will remain the Phoenix Open even though transferred to Scottsdale.

"I consider we're all in this together," said Drinkwater. "I don't care if you live on the Phoenix side, or the Scottsdale side or the Tempe side. We all enjoy the same sunshine, drive the same roads, and, by golly, we work together."

The Thunderbirds prospered as a result of the move. Of the more than $6 million Thunderbirds have contributed from tournament proceeds into local charities, about $4 million has come since the move to Scottsdale.

The last tournament at the downtown location drew a record 186,000. In the next eight years at Scottsdale, the tournament averaged an estimated 346,876 and had Saturday crowds of 109,000 in 1990 and 112,500 in 1992 and 114,200 in 1994.

"We couldn't be happier," beamed Beman.

His stadium concept has bloomed in living color at the TPC of Scottsdale. A series of mounds and valleys and ridges were turned into stands for spectators. From the ridge behind the 12th green – the same ridge on which Drinkwater took those government officials for a hot hike in 1980 – one can see play of five different holes.

Course architects Jay Morrish and Tom Weiskopf had 16 months to get the course ready for the first tournament. Their work was complicated when the low bid was submitted by a construction firm which had never built a golf course. But the job was finished ahead of schedule.

"When we told him he might have to give up some of th land to the hotel, he almost had a stroke," said Drinkwater.

Since the move to Scottsdale, the Phoenix Thunderbirds have contributed $4 million to local charities

The city of Scottsdale was the big winner. It shares the
ɔtlight of the tournament, which underlines its desirabili-
for tourists and provides recreation for its inhabitants.
e Stadium Course has high green fees ($88 in peak season)
t the Desert Course is a bargain basement deal for the
ɾage hacker ($16 in peak season).
"Our direct sales tax just from the Open alone is over
00,000," said Drinkwater. "We will pay off the bonds in
years and have somewhere between $20 and $40 million
net profit."

A series of mounds and valleys and ridges were turned into stands for spectators at the TPC of Scottsdale.

The mayor deals in generalities. For a better rundown,
's turn to Tom Beat, who has been the project manager
the city.
"In retrospect, this has been successful more quickly than
anticipated," Beat said. "When we opened the doors, the
ɜiness was pretty much there."
He said the city gets 10% of the gross on golf fees and
t rental plus 2% of the gross on beverage and sales.
"That figures to about $550,000 a year," he said.
"From the land we leased to the Princess we get 2% of
gross directly and that does not include bed tax, sales
and other items. We'll get about $850,000 a year."
Not included is a reported $1 million received from the
el up front.
'Herb's vision did several things," said Beat. "It was a
ı-win situation for everyone. It had to be. We had to
e the land, we had to have the TOUR, we had to have
hotel and Marley's land all fall together. It worked
ause of our bonding capacity.
Yes, that and a mayor with enough vision to see two golf
rses in a desert dump. ■

THE WORLD'S
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Golf's GLOBAL Village

BY CHELLE DELANEY

The PGA TOUR wanted a Hall of Fame for its players. But what was wrought is unique in the history of golf – World Golf Village

Follow these directions:
Drive into Florida. Stay on Interstate 95 South. Start looking after you've left Jacksonville. The spot to look for is north of St. Augustine and west of the overpass for Nine Mile Road. That's where an average of 38,000 vehicles whip by per day; that's where the world of golf is coming together at the World Golf Village.

"I can't think of a major golf organization that isn't involved," says PGA TOUR Commissioner Deane R. Beman, the man who initiated the idea. "The World Golf Village isn't dependent on any one organization."

Today, there is no exit at the site. But look again. Bulldozers are constructing a massive $8 million cloverleaf where at least 660,000 visitors a year are expected to leave the interstate and pull into the World Golf Village parking lots.

Here, the world of golf will honor its greatest players and their accomplishments. Here, visitors can find, under one roof, those who are honored in the World Golf Hall of Fame and the LPGA Hall of Fame, and those who will be enshrined in the newly created PGA TOUR Hall of Fame. Here, visitors can see how golf began – in Scotland at The Royal and Ancient Golf Club of St. Andrews. Here, the world's greatest golf groups will gather in the International Golf Museum and Golf Hall of Fame.

World Golf Village is the centerpiece of Saint Johns, a planned $1.5 billion, 6,300-acre mixed-use development, eight miles from St. Augustine in St. Johns County. The 440-acre village will include: the Halls of Fame and Museum; a golf academy; a high-definition, large-screen theater; 36 holes of golf, with an annual tournament; a golf library and PGA TOUR Productions, Inc., the PGA TOUR's television production subsidiary.

Says Ruffin Beckwith, acting Executive Director of the Village and Chairman of the Advisory Board

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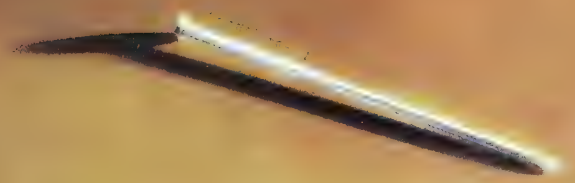

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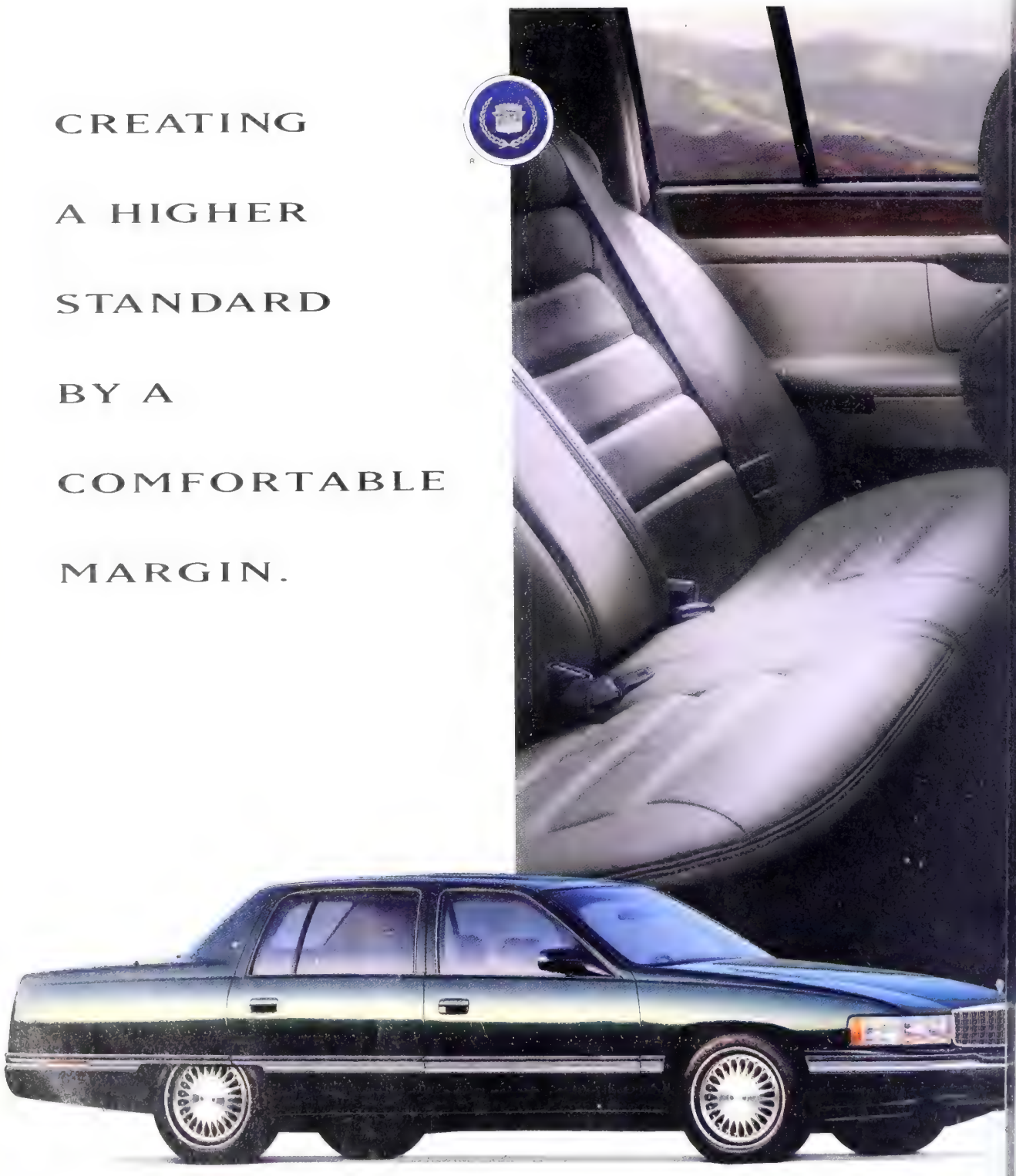

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overseeing the project, "We started the ball rolling about six years ago. Four years ago we selected one of the world's finest museum architects and planners, E. Verner Johnson and Associates out of Boston, to design the Hall of Fame."

During the past two years, when the site and financing starting coming together, other golf organizations began responding seriously to the PGA TOUR's invitation to join the project.

"Golfers are traditionally conservative," says Beman. "There are so many diversified and individual groups in golf that, until we had a firm footprint of where the bricks and mortar would go, it was just a dream. But once we got the land and the financial commitment, it was a lot easier to see."

"We were the first to come on board," says Ty Votaw, Special Assistant to the Commissioner and the General Counsel for the LPGA. "The project is all-encompassing. There's going to be something for everyone. It's not just the LPGA or the PGA TOUR."

"The World Golf Village is a major step to further expand the public's understanding of the history of this great game," says Jim L. Awtrey, Chief Executive Officer of the PGA of America.

The Royal & Ancient Golf Club of St. Andrews, the Augusta National Golf Club, the United States Golf Association, and the National Golf Foundation are assisting with exhibits and serving on the World Golf Village advisory board.

Even though the project was initiated by the PGA TOUR, the Hall of Fame and Museum now belongs to golf, says Beckwith. "The Village and $106 million in assets have been turned over by the PGA TOUR to a non-profit, golf-wide foundation, the World Golf Village Foundation." PGA TOUR Deputy Commissioner Timothy W. Finchem chairs the Foundation's Board of Directors.

Saint Johns is being developed by Davidson Development, Inc., of Jacksonville for the property owners, Memphis, TN-based cotton merchant Dunavant Enterprises, Inc.

The site has the advantage of additional land surrounding the World Golf Village.

What's more, the Saint Johns project offered some sweeteners to clinch the deal and helped put together a $106 million package to build and operate World Golf Village.

Here's how the numbers add up:

- $20 million. The value of the 440-acre site donated by the project for the Village.
- $16 million. A donation from the Saint Johns project to help build the Golf Hall of Fame and Museum and two 18-hole golf courses.
- $12 million. Fees the Foundation will take in for licensing agreements from investors planning a 450-room Hilton hotel.
- $8 million. Estimated royalties from the sale of real estate.
- $50 million. The Foundation will receive $2 million annually in sales tax rebates over 25 years from the state of Florida.

Getting the rebates depended on the passage of special state legislation.

State Senator Ander Crenshaw, a strong supporter of the measure, says, "There was a certain amount of controversy as there is with any kind of sales tax exemption. But the economic impact is almost staggering. We'll get back a whole lot more than we invested in the site."

One of the beneficiaries will be St. Augustine. "It's going to have a dramatic impact," says St. Augustine Mayor Greg Baker.

The cloverleaf interchange at World Golf Village will be completed this year. The Village will be open to visitors in late 1995 or early 1996.

"World Golf Village will appeal to all ages," Beckwith says. "It will be fun for the non-golfer, as well as the avid golfer." ■

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An Olympic Event

BY MARK SOLTAU

PHOTOGRAPHY BY SAM GREENWOOD/PGA TOUR

More than 750 volunteers helped to make it all happen at the 1993 TOUR Championship

Mark Avelar is a high school principal who seldom spends enough time on the golf course. So why would he sacrifice a week's vacation to work 14-hour days for no pay?

No, Avelar didn't bump his head trying to break up a fight in study hall. He simply loves the game, his home course in particular. That's why he agreed to become a volunteer chairman of the richest tournament in professional golf last October, the $3 million TOUR Championship in San Francisco.

"I'm very proud of the Olympic Club," said Avelar. "I feel fortunate to be a member. It's a chance to give back to golf and the community. I didn't think too long about saying yes."

Under the guidance of PGA TOUR tournament coordinator Ron Cross, Avelar helped organize more than 750 volunteers. His first responsibility was to pick four vice-chairmen to oversee 29 committees. Avelar chose Rick Maguire, Dan James, Jim Innis and Fred Campagnoli. Among their duties were parking, construction, transportation, hospitality, communications and ecology.

"Basically, my job was making sure things happened when they were supposed to and conducting orientations," Avelar said. "I did a lot of trouble-shooting. My motto was, 'I don't care who gets the credit, as long as we get the job done.'"

According to Cross, they did.

"I think 'smoothly' is a good word," he said. "It's amazing the type of people who work for a golf tournament. They have full-time jobs and families. They do it strictly for the love of golf and charity."

Right: The renowned Olympic Club in San Francisco, CA.

Maguire, who owns a Burger King restaurant, was in charge of facilities. About eight months before the tournament, he selected seven people to oversee committees. His group was involved in everything from course preparations to cleaning the portable bathrooms.

"What I tried to do was recruit seven hard-
rking people," said Maguire. "It was a lot of
rk, but it was fun being involved."
Maguire and his crew worked 10 consecutive
hour days. Their only compensation was a dis-
nt on uniforms and one weekly badge.
'Everybody wants to give something back,"
guire said. "You meet so many people through
f, it's just incredible."
Avelar arrived each morning before sunrise to
et with his vice-chairmen and make sure the
got off to a good start.
'It was a labor of love," he said. "You're dog-tired
y day. There's so much energy, you're kind of
ning on adrenaline."
Weather that week was unseasonably warm and
er coolers became a top priority. Somehow, Avelar
id time to help transport them to various tees.
The first golf shot I saw in competition was
Saturday," he said. "I expected that. We were
ried about behind-the-scenes stuff. There's so
h going on, you don't have time to think,
missing a lot of golf.'"

Cross and the PGA TOUR understood. That's why they're sending Avelar and his vice-chairmen tapes of the tournament.

"It certainly can't be done without Mark Avelar and all the volunteers," Cross said.

At Avelar's suggestion, about 60 students from two local high schools helped with ecology. None were paid, although the tournament sent donations to each school.

"We gave them T-shirts and hats," said Avelar. "It was a great experience for kids who had never been to a major sporting event."

The Olympic Club also sought help from nearby golf clubs for hole marshalling. Olympic members handled 11 holes, while outside clubs managed seven.

"Those people were critical," Avelar said.

Cross moved from Florida to San Francisco about nine months before the championship. The last major event at the Olympic Club had been the United States Open six years earlier.

"There was a lot of initial set-up" he said. "Parking, tents, security and permitting. It's all brand new. That takes a little time."

Henry Hughes, Executive Director, PGA TOUR Tournament Services, worked closely with Cross, Olympic general manager Paul Kennedy and club manager David Nightingale. The foursome coordinated the entire event, everything from leaderboards to the players' dining room.

"The operation was very smooth," Hughes said. "We always have some bumps. Certainly the public opinion is that it went flawlessly."

Kennedy agreed.

"Ron ran the day-to-day operations from their side," he said. "When there were problems, I came in. They learned things from us and we learned things from them."

Hughes also spent time with head professional Jim Lucius and superintendent John Fleming.

"My main responsibility was merchandising logo-souvenirs," said Lucius, referring to shirts, hats, jackets, sweaters, photographs, bag tags, towels and countless other items.

Lucius previously worked at Southern Hills Country Club in Tulsa, OK, site of the 1995-96 TOUR Championships. He had a larger role there

A painter capturing a breathtaking view at the Olympic Club.

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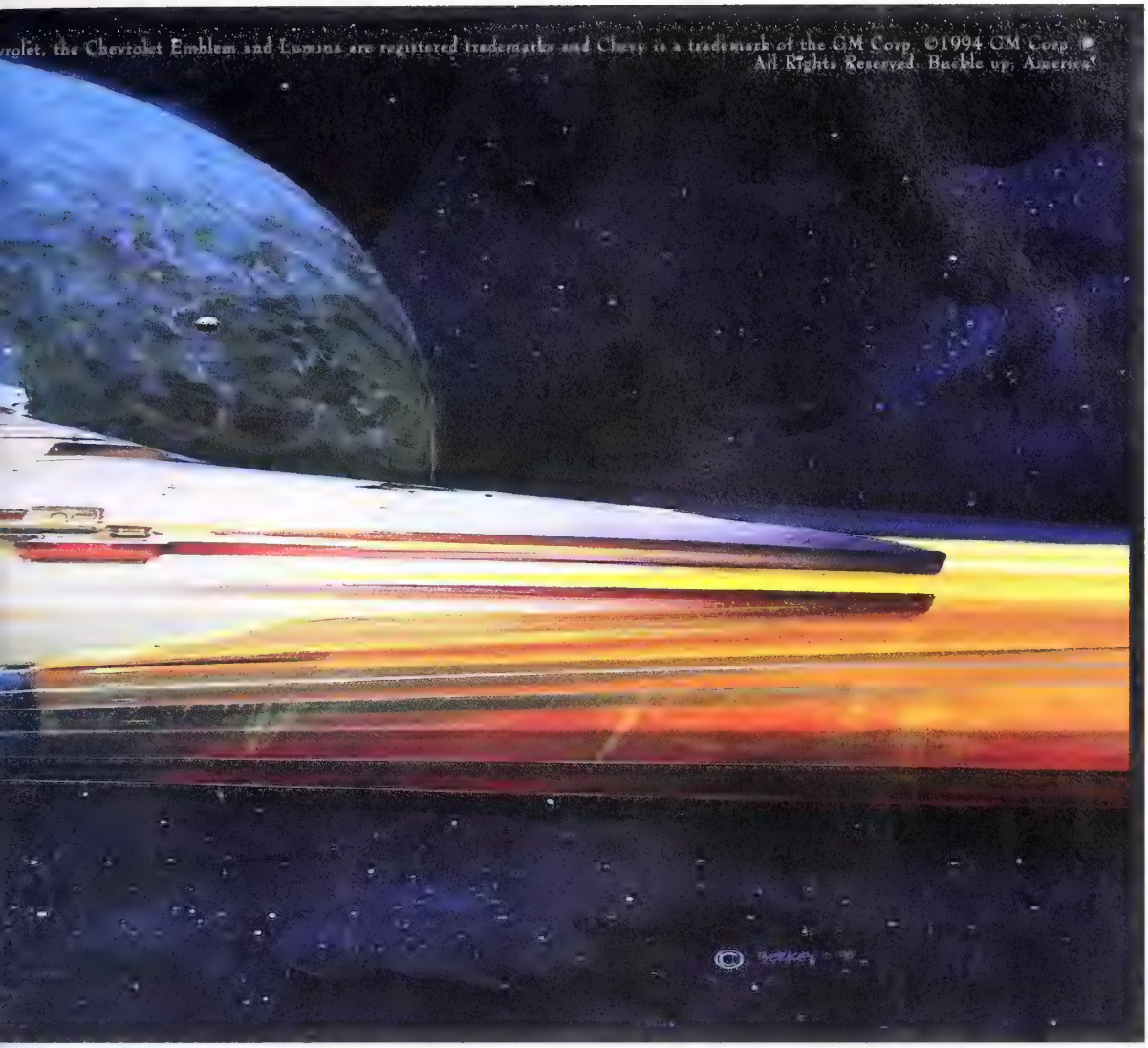

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ing the 1977 U.S. Open and 1982
A Championship.
'It was a little different," he said.
was executive vice-president and
ef operating officer of the club. I
involved in everything."
Not that Lucius wasn't busy at
mpic. When he wasn't overseeing
large merchandise tent in the
king lot, he kept tabs on the 30
ticipants, the course and the
ing range.
'It was a lot of fun having the best
ers in the world here," said Lucius.
e couldn't have been happier about
it they said about the course. I
n't hear a disparaging word."
Neither did Fleming.
'By comparison to a U.S. Open, it
ned easier to manage," Fleming said. "It was
a fun experience. We were able to achieve the
conditioning we ever have had here."
ndeed, the historic Lake course, one of two on
site, was the star of the show. Players raved
ut it.
'This course is awesome," said Paul Azinger.
a masterpiece."
Added Tom Kite, "Pebble Beach is my favorite,
this is not far behind. It has incredible balance."
The comments came as no surprise to the 4,700
members, nearly 1,000 of whom hold golf
ileges.
'The golf course stood on its own." Hughes said.
The real winners of the event were Bay Area
ities. An estimated $450,000 was raised, and
nizers hope to do even better next October
n the event returns to Olympic.
'The big thing is the charity angle," said club
ident Vince Kilduff. "That was the whole goal
ie beginning."
Another objective was to minimize disruptions
ie club. Cross took care of the little details,
setting up 175 portable bathrooms and six
ession stands. He also distributed 2,500 feet of
mesh fence, 60 coils of rope and 2,000 stakes.
They know what they're doing," Kilduff said
e PGA TOUR staff. "It's their business. It ran
smooth. It just kind of happened."
or the first time at Olympic, corporate sky
s were constructed behind the 16th and 18th

An estimated $450,000 was raised at THE TOUR Championship last October.

greens. Twelve corporate tents were sold, with nearly 70 companies participating.

"Corporate America is beginning to recognize this tournament," said Hughes. "It has really grown in stature and the significance has changed."

Not that Hughes was satisfied. The tournament faced direct competition that week from the San Francisco Giants, the San Francisco 49ers, Cal and Stanford.

"I think we underestimated the competitive nature of the sports market in the Bay Area," Hughes said. "We had hoped to have a little more corporate support. Given all the variables, I think we had a tremendous year."

Nearly 100,000 spectators attended, and organizers think they will surpass that figure the second time around.

"It should be a bigger and better experience," said Kennedy. "The Olympic Club can contribute more. We can fine-tune things."

Avelar will return as volunteer chairman.

"All four vice-chairmen are back," he said. "We'll have some changes because some people want to do something different. We'll accommodate that."

As for his vacation time, Avelar doesn't mind surrendering another week.

"It's a great cause," he said. ■

For corporate hospitality and ticket information, call 800-741-3161 or 415-587-7888.

Calling The Shots

BY BOB VERDI

When can a three-foot putt to save par at gut-check time in a $1 million dollar tournament sound like fun?

When Gary McCord and Roger Maltbie are whispering into their microphones. And why not? To 99% of the population, golf is intended to be enjoyable, an escape, the very essence of relaxation. Golf is perhaps the ultimate sport for socializing. Conversation and comradeship are as intrinsic to the game as bunkers and trees. Besides, if golf is the sport to be played from ages 8 to 80, are we supposed to spend those years in stony silence?

Life is tough enough, especially for those precious few golfers who need to sink those three-footers to feed the family. McCord and Maltbie have been there – and still are – which renders them the perfect people for their situations. Virtually every week during the PGA TOUR season, McCord and Maltbie are either playing golf or broadcasting it. And their business is our pleasure.

"A scary thought," says McCord. "Roger and I grew up in California and came up together on the mini-tour. The thought of one of us ever being allowed on the air is frightening. But both?"

These M & M boys of summer – McCord with CBS and Maltbie with NBC – are not alone. Peter Jacobsen, another card-carrying member of the TOUR who does not lack for personality, will continue to telecast selected events for ABC, but

NBC golf analyst and 1994 TOUR winner Johnny Miller [illegible] at this Sunday's pin placement.

has opted to play more during 1994. Andy North and Gary Koch have worked with ESPN. Johnny Miller, a staple on NBC, won at Pebble Beach in February. And, of course, Jack Nicklaus, no less than the greatest golfer ever, has been known to do 18 holes of hard labor, then climb into ABC's tower for expert analysis. Which reminds us why the M & M boys, if not the first, come across as best. It's called perspective.

Gary McCord of CBS (left) and Jeff (Squeeky) Medlin.

"Look," said Maltbie, "if I was going to be the next Jack Nicklaus, I think I would have known by now. I've been out here a long time. Golf has given my family and me a wonderful life, and I've led a privileged existence, which I really do appreciate. I'm out here to earn a buck, yeah, but I'm also out here to have a few laughs."

Maltbie has succeeded mightily, early and often. While building his résumé as PGA TOUR Rookie of the Year in 1975, he won consecutive tournaments – the Quad Cities Open and the Pleasant Valley Classic. Immediately after the latter, Maltbie felt compelled to revel in his good fortune. So, he adjourned to an establishment in nearby Worcester, MA. Alas, it would prove not to be a casual watering hole, and our champion awakened the next morning quite penniless.

"Once I focused," Maltbie recalled, "I realized I'd lost my $40,000 winner's check. Left it on the bar. I phoned the tournament to have it replaced. No problem. Then I called the, uh, restaurant. They eventually found the original and asked if they could frame it. For lore. That's where all the stories start, if you know what I mean."

There is no record of McCord ever misplacing a winner's check from the PGA TOUR, and for the quaintest of reasons. He's never had one. Since debuting on the PGA TOUR in 1973, when he amassed $499 to land with a thud at 423rd on the money list, McCord's best finishes have been second in the Greater Milwaukee Open in 1975 and a tie for second in the same tournament two years later. That's a pretty decent report card from Wisconsin. Problem is, there are 49 other states.

"My career started slowly and tapered off from there to downright pathetic," McCord noticed. "I spend year after year running into walls head first. My worst flaw, among many, was an inability to concentrate on anything for any longer than 11 seconds."

So it was that McCord found himself on an airplane in 1985, pointed toward the Memorial in Dublin, OH. The CBS golf crew, captained by much-decorated producer Frank Chirkinian, was also aboard. Only, they knew where they were going. McCord had no particular direction, but he did have the good sense to tug on Chirkinian's sleeve and inquire about the world of television. McCord was told to report to the 16th hole a couple of days later to sit beside Verne Lundquist, a veteran with a velvety voice. Suddenly, McCord was told to put on the headset and talk. The rest, as they say, is hysteria.

"It went that way for a couple years," McCord said. "I'd go to a tournament and see Frank. He'd say, 'I'll talk to you after you miss the cut' and then Frank would put me to work. Same thing every week. I'd show up for a tournament, miss the cut, and then Frank would put me on the air. Eventually, I signed a contract, and here I am, coming into your living rooms, ready or not."

Roger Maltbie of NBC (left) with John Daly.

McCord's good story should not be overwhelmed by his good humor. If he were a complete and utter disaster at age 46, he would neither be willing nor welcome to play golf at any venue featuring galleries, corporate tents and expensive

cars in adjacent parking lots. In fact, McCord is something more than a delightful chap to hire for an outing. He can still get the ball into the hole.

"And I'll continue to play some," McCord said. "It keeps you current. And if any of the guys I talk about on the air want to get in my face over something I said, they can find me in the locker room. But I won't play much. The West Coast, before our CBS schedule kicks in, and not a lot after that. Eight, in all. Eight is Enough!! Pretty snappy, huh?"

Gary Koch of ESPN with Jim Gallagher, Jr.

Maltbie, 43, has a slightly different agenda. He still majors in playing and minors in broadcasting. Last year, he played 20 events and earned $155,454, while handling about half that many tournaments for NBC. It is an itinerary that keeps the juices and cash flowing.

"At this stage, it's the right mix for me," Maltbie said. "I don't know where it's all going to lead, but I'm not one to spend a lot of time thinking about the future. I've never been afraid of having a good time, but I do sleep and I do work at my game a little harder than most people think. After all these years of beating balls on the practice range, no, I don't have the same urge to do it week after week.

Payne Stewart with Peter Jacobsen.

"But that's the nice thing about the mix. I'm the on-course rover with the last group on the leader board, and that definitely pumps me up. I mean, for something like last September's Ryder Cup in England, I would want to watch that if I were back home. The fact that I got paid to be there, walking beside Paul Azinger and Nick Faldo, well, that's pretty exciting.

"NBC said they wanted to take a look at me a few years ago. They just told me to 'be myself.' I don't know exactly what that is, but it's gone well. My fate as a broadcaster is in other people's hands, so I don't worry about it. I do know that, after a while, you get tired of playing. I can go back to TV, where I can take the red-eye flight from my home in California and not worry about arriving at the course in peak physical condition. Then you do the TV, you see guys making great shots, you hear the roar of the crowd, and you get the itch to go play again."

McCord's style is more deliciously irreverent, but reports that he's been cautioned to tone it down have been greatly exaggerated.

"Once during a Masters telecast, I mentioned that somebody hit a ball into the cheap seats," McCord said. "Not a whole lot of time passed... maybe three seconds... before Chirkinian pressed the button and let me know in my headset that there are no cheap seats at Augusta National. I'm sure at the start, legends like Pat Summerall and Ken Venturi didn't know what to expect from me. They probably still shake their heads at some of the things that come out of my mouth. But Pat told me to be natural, and they've all been great to work with. Even the fat swine from Merry Old England."

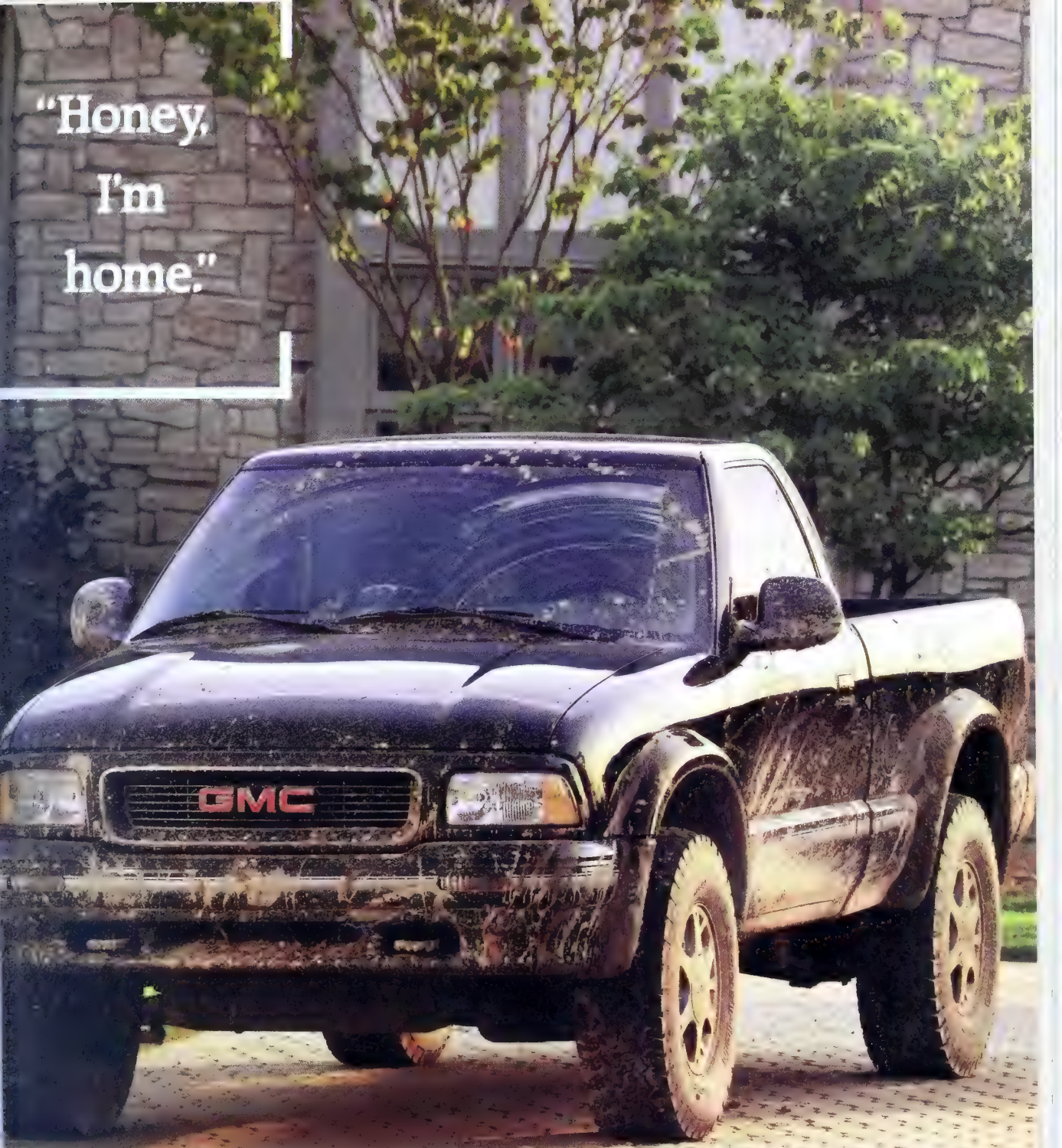
Say what?

"Ben Wright," McCord went on. "When I got into this, I figured it would be best if I not only made fun of myself, but got the other guys to do it, too. I couldn't get them to bite on it, so I had to attack someone. Ben was the lucky guy."

And so it goes. Not all the purists like it, but McCord nurtures no aspirations of making everybody happy. "I've still got a job," he said. "I guess that means something."

So then, let's indeed hold the one-liners for a moment. McCord and Maltbie might bring us an ounce of mirth every weekend, but they also provide several pounds of credibility. They've played enough golf, and still are, to comprehend that a poor shot need not mean that its author is a poor golfer. McCord and Maltbie will criticize but they don't bludgeon. They respect the game and its players, but they can relate to those of us who were born with the yips.

If you don't think it's possible to have your tongue in your cheek and still talk about golf, stay tuned. ■



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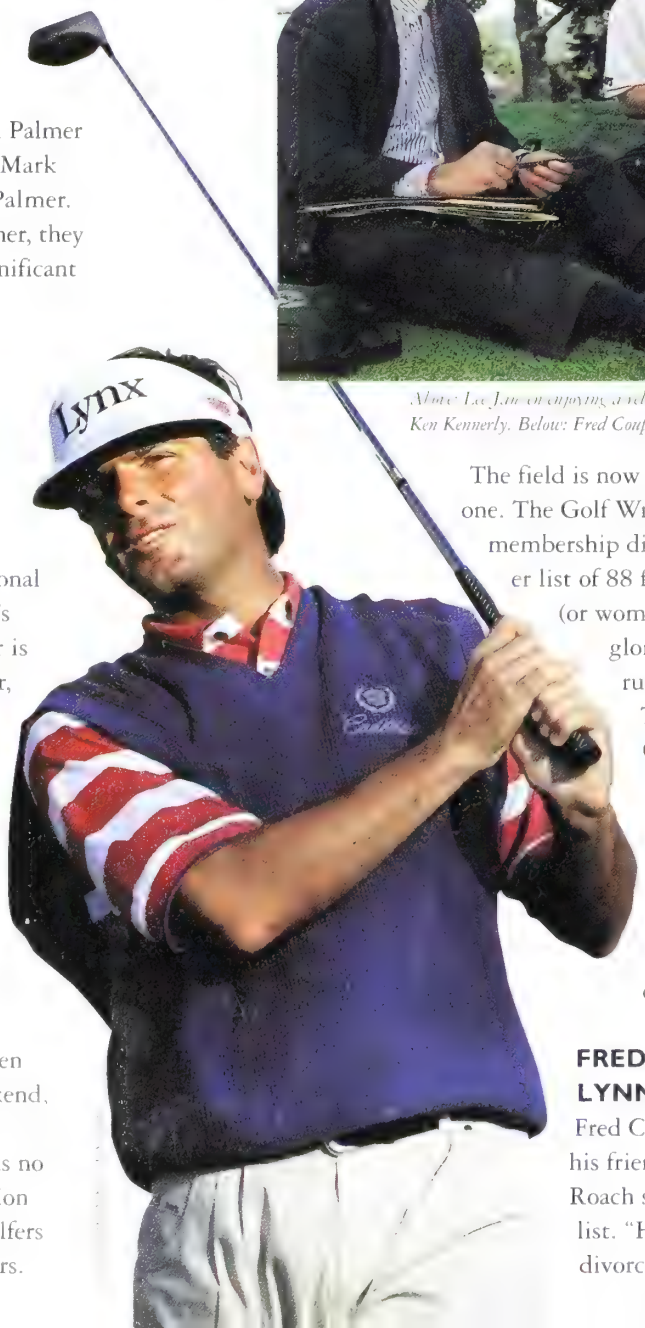
A managing agent

BY TIM ROSAFORTE

In the beginning, either Arnold Palmer created Mark McCormack or Mark McCormack created Arnold Palmer. It doesn't really matter. Together, they became one and formed the first significant business team in golf.

With Palmer hitching up his pants and McCormack putting together the deals, they went on a lucrative ride through corporate America. They were equally dependent on one another, and not much has changed 30 years later except McCormack's International Management Group has the world's largest stable of golfers and Palmer is still raking in over $11 million a year, second only to Michael Jordan. Arnold may be 64 and well past his golfing prime, but he's still peaking at the box office.

When McCormack and Palmer shook hands in their first business deal, professional golf was a caravan of gypsies that shared rooms and lived out of the back of their loaded-down cars. This was back in the late '50s, early '60s, when golf wasn't on television every weekend, when professional golfers were an untapped marketing tool. There was no courtesy transportation, no $1 million purses, and thus no real need for golfers to have professional business advisors.



Above: Lee Janzen enjoying a relaxing moment with manager Ken Kennerly. Below: Fred Couples

The field is now a crowded and competitive one. The Golf Writers Association of Ameri membership directory lists a player/mana er list of 88 firms ranging from one ma (or woman) operations to mega cor glomerates such as IMG, whic runs the careers of 30 PGA TOUR pros from offices in Cleveland, London, Los Angeles and Melbourne. Choosing a manager is on of the most important decisions a player has to make. In some cases, ev more important than choosing a wife.

FRED COUPLES AND LYNN ROACH

Fred Couples found out just who his friends were last year, and Lyn Roach showed up at the top of th list. "He worked harder on the divorce thing than my lawyer di

uples said of his business manager. "We sat
vn a couple of nights until 2 in the morning
ing about it. The idea of him helping me out
a big plus."

Roach met Couples in 1985 when he was
ending his title in the Tournament Players
mpionship. Roach was then an accountant han-
g athletes' careers for Advantage International
Washington, DC. Couples was a superstar in
making.

There was another guy (with Advantage)
I was dealing with. We just didn't hit it off
l," Couples remembers. "I was going to leave
vantage. They came and said there was a 90-day
ulation in the contract to let them know. In
90 days, I would call and talk to Lynn. I was
ng him how easy it would be for me to move
stuff someplace else. He said no problem. He'd
me out."

That's when Roach realized most athletes don't
because of management firms, but because
ersonal relationships. When he left to form
Players Group, Inc., in 1990, Couples, Fulton
em, Jay Haas and Dan Pohl quickly followed.
vasn't long before the former accountant had
own "boutique-type firm."

"A lot of players are more comfortable with
ple than the big firm," Roach said from his
e in McLean, VA. "It's just an easier situation."

t was Roach who put together Couples' block-
er deals with Lynx, Cadillac and Ashworth,
he's been very careful not to oversell Fred. One
on is that the window of Couples' popularity
remained open, so they can be more selective.
second is Couples' personality. He's not the
of guy to be tied down with a heavy schedule
orporate commitments.

A lot of people see Fred as he is," Roach said.
doesn't want his life to be terribly complex.
ll notice he's got a sleeve open on his clothing.
loesn't want to meet with a sponsor in every
n he goes to. Now that last year is behind him,
wants to focus again on being as good a golfer
can be. If he leaves an endorsement behind,
s OK."

VIS LOVE III AND VINNY GILES

e was no "recruitment" of Davis Love III. "I was
g with Vinny all the way," Love said. Giles'
ground in amateur golf and his friendship with
Love's father Davis, Jr., cemented the relationship while Love was attending school at North Carolina.

"The first time I went to talk to Vinny when he was managing me, before I went to TOUR school, he said, 'You go and try to qualify for the TOUR and get a TOUR card and then I'll talk to you," Love said. "That, to me, told me what was best for my golf game. Vinny doesn't want to talk about contracts of how much money he can make me or what tournaments he can get me in. He wanted me to have a TOUR card, go out and play the TOUR for a year, learn how to play golf first. He's always been the type to believe in the philosophy, the better you play, the less you have to worry about what kind of deals you're going to get, because they're going to come to you."

Davis Love III with long-time friend and manager Vinny Giles.

Giles, a graduate of the University of Virginia law school, won the U.S. Amateur in 1973 and started his firm, Pros, Inc., that very same year. His first client was Allen Miller. Tom Kite signed in 1974. In 1975, Giles signed the first three players out of TOUR School, Jerry Pate, Gary Koch and George Burns.

The original premise was that Pros, Inc., would be a small, personal-service company. "Our motto," Giles said, "is that if you can't get to us, or if we don't return your call in 24 hours, we've gotten too big."

Pros, Inc., now has 22 clients and four management-type people. Kite and Lanny Wadkins are not only the two most established clients – they have approval on what players Giles manages. "Many times I've heard Tom refer to us as 'We,'" Giles said.

Taking in Love was a no-brainer, since Kite had been assigned surrogate responsibilities long

before the plane crash that took the life of Davis, Jr., in 1988. Once established, Love signed big endorsement contracts with Sea Island, Tommy Armour and Ralph Lauren Polo.

"We've turned down some deals from beer companies that looked like a lot of money," Love said. "It turned out it was best for my career. Vinny's done the very smart, conservative things, which fit my personality. I don't need to be marketed real heavily, like a Greg Norman, because that's just not my personality."

GREG NORMAN AND FRANK WILLIAMS

With a new business manager based at the office inside his Jupiter Island compound, Greg Norman has freed his mind to concentrate on golf.

"I don't work in my office anymore," Norman said. "I went in the office the other day and said

Greg Norman will have more time to focus on golf with the help of his new business manager, Frank Williams.

to Nina (his secretary), 'I've got nothing to do. I'm bored.' She said, 'Go practice.'"

Norman spent 12 years as the star client of the International Management Group. The Shark split with IMG for very much the same reasons Jack Nicklaus did in the early 1960s. He wanted autonomy over his business and golf interests, and at IMG he was part of a stable that included such international stars as Nick Faldo, Nick Price and Bernhard Langer.

"I know I can't be seven horses in an eight-horse team," Norman said.

Frank Williams, the new managing director of Great White Shark Enterprises, ran IMG's Australian tournaments and first met Norman when he was tournament director of the Australian Masters.

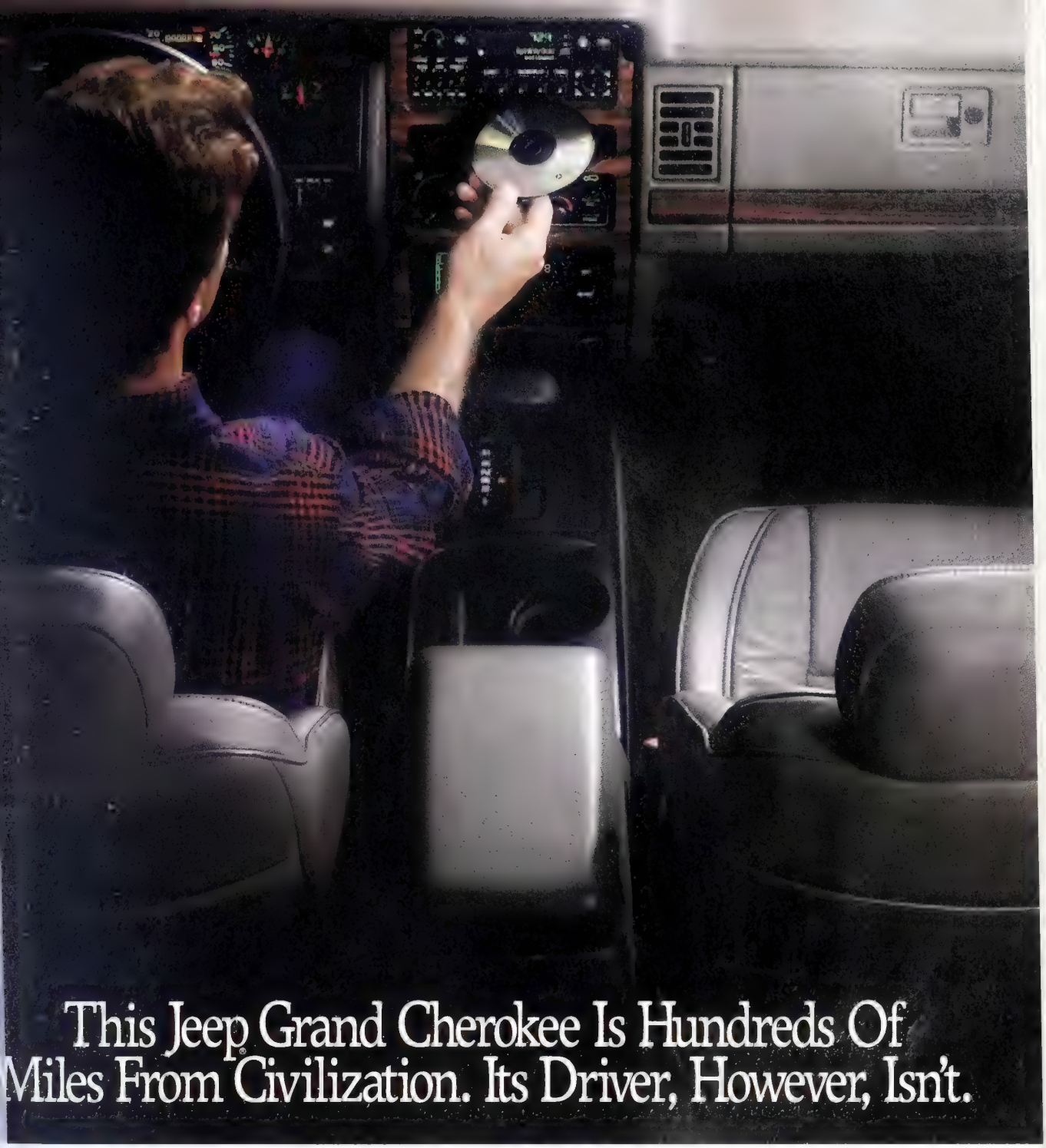
"The sheer volume of stuff that comes in is unbelievable," Williams said. "I told him if he takes his briefcase on the plane, I'm going to take my shagbag."

Williams, who replaces Hughes Norton, claims he won't just be a yes man for the Shark. "He asked me last year half-heartedly, and I said, 'Forget it, who would want to work for you?'" Williams said. "He said, 'That's why I want you to work for me, because you're always going to tell me.' There will probably be times when it's a bit stormy, but that's OK. He knows what I'm like. I've known him for 16 years. I knew him when he first started the circuit, when he was a raw kid from Queensland. He's done wonderful things for me in the promotion of my tournament."

Williams had an idea to have Norman come up out of a pond at Huntingdale wearing an aqualung and holding a 5-iron. He ran it by Norton and was told to forget it. He ran it by Norman's wife, Laura, and was told that "Greg probably wouldn't go for that." So he came up with an idea.

"I figured if I wrap it up and sell it properly, he might do it," Williams said. "So I said, 'Look, do you remember the scene when James Bond came up in the aqualung, blew up a factory, took off his wet suit and had a tuxedo on, then went into the casino with a pretty girl on his arm?'

"'I want you to do something similar to that,' and he said, 'I'll do it.'"



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IL MICKELSON AND CKEY HAMBRIC

key Hambric, founder of Cornerstone Sports Dallas, went from being shut out in the Phil kelson Sweepstakes to hitting the jackpot. The reason I went to Rockey is that in a nego- ng situation, I felt Rockey would handle it way I would want the situation to be handled. t he was the most like me. Whether the deal ne, I would want there to be positive relations the companies I'm with and the companies I end up not being with. He doesn't ever e any doors."

Hambric started in 1982 when he shifted his er from a CPA to handling the career business arry Nelson. In 1986, he signed Bob Tway ing out of Oklahoma State and Tway respond- y winning the PGA Championship. His next nt was Larry Mize, and Mize won the 1987 ters. He signed Scott Simpson in 1987 and pson won the U.S. Open. Nelson concluded year by winning the PGA, giving Cornerstone out of five major championship winners.

His firm grew to 30 players, including the ition of Corey Pavin in 1991. Dudley Hart is ected to be his next superstar, but the real herlode is Mickelson, who has already signed ative deals with Yonex, Etonic, Titleist, Rolex, yhawk and Fairway Blues. His one-day outing s $30,000, and he has already turned down a nament in Japan the week of this year's Buick tational of California that would pay him more appearance contract than it would to defend itle and win the U.S. tournament.

There have been companies that wanted me," kelson said. "But when they find out what my ir amount would be, they go away. My feeling may not be worth the price I'm asking, but I t want to do it for anything less if I don't need m not scrounging for every dollar."

GALLAGHER, JR., AND EDDIE ELIAS

Gallagher signed with Eddie Elias just winning his first TOUR event in 1990 at vaukee. Before that, he spent the first six managing his own career. "I didn't feel like ded an agent," Gallagher said. "I just did every- ; on my own. I'd book outings through word of h. Without winning a tournament, your value ferent. I didn't think I needed an agent."

Phil Mickelson has signed deals with Yonex, Etonic, Titleist, Rolex, Grayhawk and Fairway Blues under the direction of Rockey Hambric.

Fuzzy Zoeller and Dunlop Maxfli rep Joe Moses recommended Gallagher to Elias' firm, which started 35 years ago with Tommy Bolt as its first client. Chi Chi Rodriguez was next to join Elias, who is based in Akron, OH, and has offices in Miami and Cleveland. Others in the stable include Gary McCord, Ken Venturi and Bob Murphy.

"The neat thing about Eddie representing you is it's like a family," Gallagher said. "I wanted somebody who cared the best for me as a person."

What impressed Gallagher the most was after he lost a playoff to Tom Purtzer in the 1991 NEC World Series of Golf. Knowing Gallagher was down, Elias threw together an impromptu party that about 30 members of the Gallagher clan attended at his home in Akron.

"Right there he went from the level of an agent to a friend," Gallagher said. "That made the relationship special. I realized then that our friendship came first."

With Barry Terjesen handling this account, Gallagher signed deals to represent the Ernst & Young accounting and investment firm and the new Brickyard Crossing course Pete Dye designed at the Indianapolis Motor Speedway. This was before Gallagher became a giant killer by defeating Seve Ballesteros in Ryder Cup singles and Greg Norman in THE TOUR Championship.

Gallagher's daily fee is up to $15,000, and he's become one of the hottest new properties in professional golf. What makes him such a hit at pro-ams is that he's a great communicator. "I'm just a normal person," Gallagher said. "I can relate to just about anybody. That makes me a big plus in pro-ams

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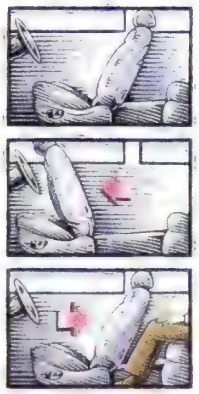

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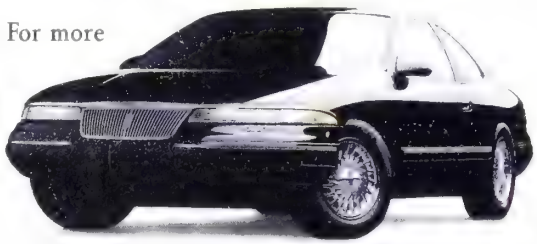

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with corporate people. A lot of guys who are great players are more introverted than I am. Anybody I do an outing with, I want them to leave feeling that's one of the best times they've ever had on a golf course."

PAYNE STEWART AND ROBERT FRALEY

Payne Stewart and sports attorney Robert Fraley met as neighbors at Arnold Palmer's Bay Hill Club and Lodge in Orlando, FL. They became such good friends that Stewart asked Fraley and his wife to become godparents to his children.

Stewart had just left ProServ when he asked Fraley to look at some of his contracts. "He didn't play golf and wasn't interested in golf," Stewart said. "He kind of did it as a favor."

Fraley's clientele was predominantly big-name NFL coaches. He represented Bill Parcells, Dan Reeves, Joe Gibbs and Buddy Ryan. But it was those NFL connections that helped put together one of the most lucrative contracts in golf, a deal that must be good for both sides since NFL Properties renewed it in 1992 for five years.

Stewart already stood out by wearing knickers during tournament play. But by coordinating those knee-length pants with shirts bearing NFL team colors, Stewart identified a different market. When he won the PGA Championship in 1989 at Chicago's Kemper Lakes, Stewart was wearing the colors of the Bears. There isn't a press room he doesn't walk in that a reporter asks what his lineup is for the week.

Payne Stewart fashionably dressed in knickers.

Stewart's success in the marketplace convinced Paul Azinger and Jim McGovern to seek representation by Fraley. Azinger's business affairs were being handled by his father, Ralph, and McGovern's by his father, Howard. In 1987, Fraley formed his own golf management firm, called it Leader Enterprises, Inc and hired David Moorman, a law graduate and collegiate golfer at Notre Dame, to run it.

Stewart has since added Lexus and Spalding to his portfolio and trusts Fraley to handle his futur as if it were his own.

"Finding honest people in this business is prett tough," Stewart said. "Robert's integrity, the people he's associated with, the other clients he has, told me he was nothing but first-class."

LEE JANZEN AND KEN KENNERLY

The first time they met was at PGA TOUR schoo in 1989 at the TPC at The Woodlands near Houston, TX. Lee Janzen just shot 77 in the fifth of six rounds, with a 41 on the inward half. The last thing he was thinking about was managemen groups – he didn't know what to think when Ken Kennerly walked up and said he played wel

"My wife and I didn't know anything about management groups," Janzen said. "We were bo taken back by this, that anybody was even recru ing me before I finished."

Janzen shot 72 the final round and finished 16th to earn his TOUR card. He also kept Kennerly's card and became the star in a young stable Advantage assembled.

At the time, Janzen was just a diamond in the rough, but once he started to hit fairways the sponsors started to line up. Kennerly put together deals with Founders Club equipment. Cross Creek shirts, Titleist balls and one of the most prominent logos in golf, Sharp's non-alcoholic beer.

You should know the rest of the story. Janzen, with two victories under his belt, won the 1993 U.S. Open at Baltusrol and was all over worldwide television for four days last summe "The hat is the most exposed item on a player, Janzen said. "Unofficially I've heard the U.S. Open was worth $2 million in advertising tha week for Sharp's."

When the season ended, Janzen was in the ca bird seat. But so was Kennerly, who left Advant to work for Golden Bear Sports Management. Janzen, who signed a lucrative off-season deal t play Hogan clubs would soon follow Kennerly. What resulted was a unique arrangement where both Advantage and Golden Bear would manag the U.S. Champion for the 1994 season. ■

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DIGITAL PIONEERS

BLAZING A TRAIL ON THE INTERACTIVE FRONTIER

Pop Rocket Inc. founders Joe Sparks, his wife, Maura, and friend Kent Carmical have been holed up in a San Francisco Victorian for two years. They quit good jobs, drained their bank accounts, and borrowed money—all to make Pop Rocket a big name in a new category of entertainment software. They're about to unleash on the world their brainchild: a CD-ROM called *Total Distortion* that is an altogether different breed of software cat—part video game, part Hollywood movie, part music video. Says Carmical: "We're going to be big and famous."

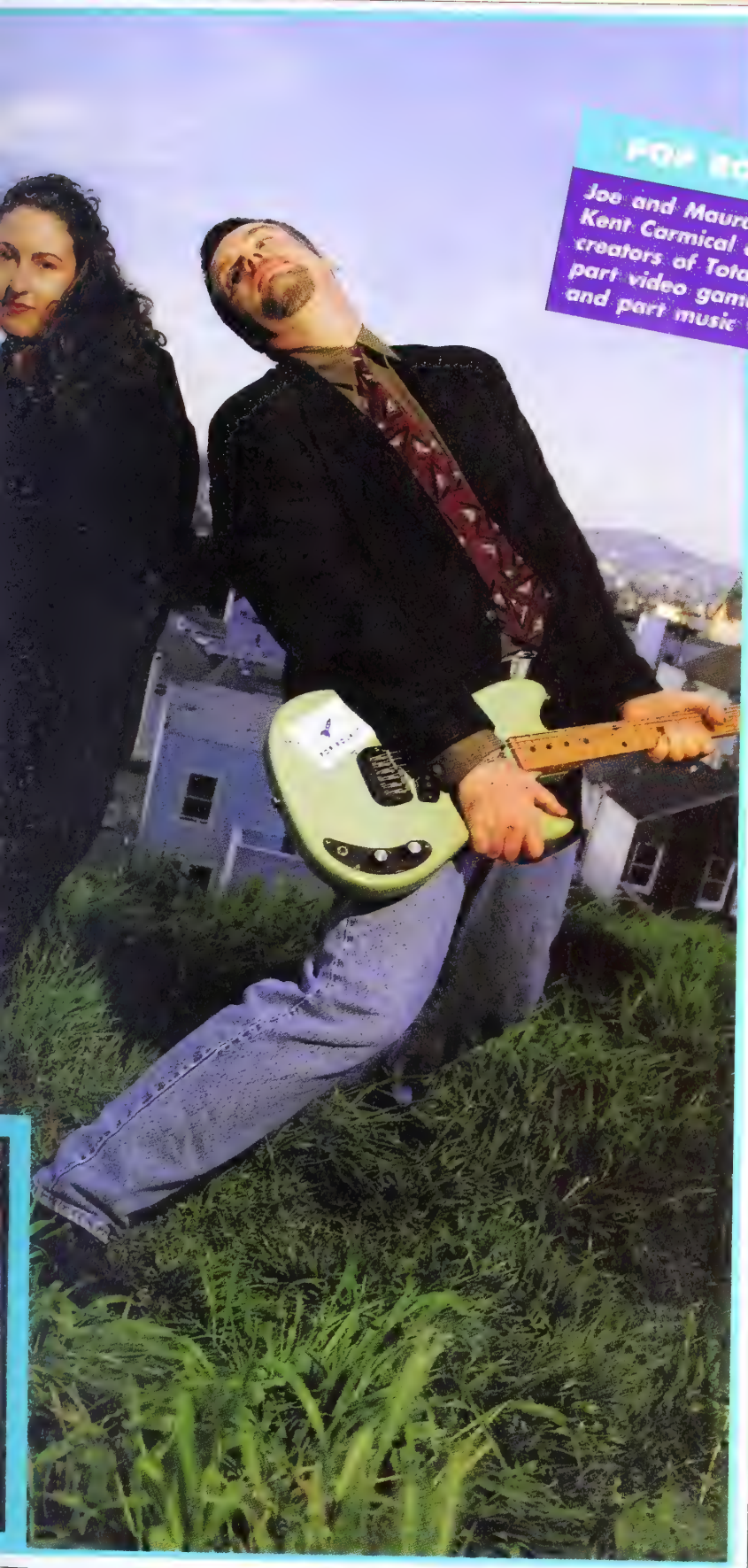
Forty miles south, in Silicon Valley, Strauss Zelnick, the former head of Twentieth Century Fox Film Corp., is making his bid for the same fame. He quit Hollywood to lead a band of computer jocks at startup Crystal Dynamics Inc. The company's goal: to become the first "interactive studio of the future." One of its first programs is *The Horde*, a medieval adventure starring actor Kirk Cameron of the TV sitcom *Growing Pains*. Says the 36-year-old Zelnick: "We're on the cusp of doing something extraordinary here."

Back East, on a quiet street in the Riverdale section of the Bronx, a dozen programmers, artists, and writers have taken over a three-family house. They're finishing up *Millennium Auction*, the first product from three-year-old Eidolon Inc. Founded by an American physicist, funded by an Armenian contractor, and staffed by ambitious twentysomethings from all over, Eidolon sees its future in "intelli-tainment"—games for grown-ups that combine adventure, high finance, and a dose of social satire. Says President Vatche Kalaidjian, a 25-year-old Jordanian engineer: "We are one of the leaders of the pack."

Meet the digital pioneers—apparently sane people doing insane things such as risking everything they have ever owned to stake a claim in the next frontier of the digital revolution—the land of "interactive content." This is the gold rush of the Information Age, a mad dash to come up with a new genre of software that's compelling enough to keep consumers glued to their new 500-channel cable systems and exploring the Information Superhighway. Never mind that interactive TV won't even be tested until this summer and that the Information Superhighway itself may be years away from completion. Hundreds of entrepreneurs from all walks of life and from across the globe are heading into the new, uncharted territory where computers, telecommunications, and television converge.

HOT TICKET? And every one of them figures he or she has as good a chance as the next person to hit paydirt: Nobody really knows what kind of programming will click in this new and untamed medium. It's a telling sign that industry folk refer to their efforts simply as "content." Even they have no idea what combination of Hollywood pizzazz blended with new computer capabilities will make the Spud Family want to interact with their TV shows.

Will the hot ticket be dramas in which you guide the plot? Will it be game shows where all viewers can compete for prizes? Maybe it's extracting additional information from a news program, sports show, or documentary with the click of a button. Or will it be just shopping electronically in the virtual mall. "We are still in the era where we are struggling," explains Stan Cornyn, who founded Warner New Media and is now executive vice-president of Media



FOR ROCKET INC.

Joe and Maura Sparks and Kent Carmical are the creators of Total Distortion—part video game, part movie, and part music video

Vision Technology Inc. in Silicon Valley. "This is like the early days of movies."

Indeed it is. Experts say interactivity could explode just as the movie industry did in the 1920s. There are no firm dollar figures yet, but market researchers say that interactive TV will gobble up huge chunks of businesses that in 1993 generated more than $300 billion in revenues in the U. S., according to Decision Resources Inc., a Waltham (Mass.) consulting firm. The list includes video games, a $6 billion market; videotape rentals, $12 billion; premium cable channels, $5 billion; catalog shopping, $150 billion; TV shopping, $2.5 billion; and books and periodicals, $16 billion. Advertising—a $130 billion business—is likely to be transformed, too, as media go digital (page 103).

Just how much of the treasure trove will be tapped by interactive TV depends largely on how good the "new content" is. If the most action-packed video games are available across the network, for instance, why buy game cartridges? Observes Michael Braun, president of Kaleida Labs Inc., the multimedia joint venture of IBM and Apple Computer Inc.: "Nothing will happen without great content."

"WE'RE TROLLING." And great content will not happen without great talent. Just as the "digitalization" is forcing a convergence of industries—computers, telecommunications, entertainment, and publishing—the quest for content is triggering a massive cross-pollination of talent. The roster of those involved in the "new media" companies reads like a United Nations of Convergence: video-game veterans from the go-go Pong days of Atari Inc., big-name Hollywood script writers, top rock musicians such as Peter Gabriel, former *Saturday Night Live* comedian Dennis Miller, master of horror movies Clive Barker, special-effects folks from *Star Wars* and *Jurassic Park*, and a stable of Silicon Valley's brightest programmers.

These people are founding or joining a rash of startups, all with dreams of becoming the Microsoft Corp. of interactive media. The big guys want a piece of the action, too. Microsoft has 20 to 30 projects under way. Time Warner Inc. and Viacom Inc. have stables of creative types working on interactivity. And when the big shots of media, entertainment, and software aren't building, they're buying—or dealing. Says Edward D. Horowitz, CEO of Viacom's New Me-

VIRGIN INTERACTIVE ENTERTAINMENT

Martin Alper's next game, code-named Greed, takes shape, starting with film of live actors performing stunts

dia & Interactive Television group: "We're trolling in Marin County. We're trolling the nooks and crannies of San Francisco. We're trolling L. A., and we're trolling Manhattan. We're being bombarded by ideas. That's good because no one has the one right answer. This is still a cottage industry."

That's causing a land-rush mentality on the wide-open content front. Startup Rocket Science Games, for example, raised $4 million in venture capital in one day—without a business plan. Now, it's seeking an additional $15 million from media companies. Content maker Fathom Pictures, based in Sausalito, Calif., says it was approached by 81 companies, from entertainment conglomerates to venture capitalists, before forming a venture with the Griffin Group, Merv Griffin's investment company.

Meanwhile, King World Productions Inc., the TV distributor for *Wheel of Fortune* and *Jeopardy*, has joined with Home Box Office Inc. in backing Zelnick's Crystal Dynamics. And Sanctuary Woods Multimedia Corp. has hooked up with the Comedy Central television channel. AT&T has invested in P. F. Magic Inc., a new San Francisco-based media company. The mix of talents is essential, says John Scull, P. F. Magic's managing director. "If you're going to get into a covered wagon, you want people with different skills."

Even then, many pioneers won't survive the arduous trip across the frontier. Already there are warning signs. The first big opportunity to test "content" on a large number of consumers using a real, live, interactive-TV network has been postponed. In April, Time Warner Cable was to begin testing its "full-service network" in Orlando, Fla. But that has been delayed until year-end because of technical snafus. Meanwhile, the rise in interest rates, the Federal Communications Commission's rollback of cable-TV rates, and a falling stock market have deflated the Information Superhighway euphoria. Gone with it are such megadeals as the Bell Atlantic Corp.-Tele-Communications Inc. merger and the cable-TV joint venture between Southwestern Bell Corp. and Cox Enterprises Inc.

Now, the first big interactive-TV pilot is slated for August when U S West cranks up a 2,500-home trial in Omaha. The Baby Bell will offer movies on demand, gam
shopping, and information serv
es. Soon thereafter, Viacom plans
launch a 1,000-home look-see in Cas
Valley, Calif. By the time all the tech
cal kinks are worked out, howev
widespread deployment of interact
TV could be pushed back to 1998,
stead of 1996, pundits now predict.

"STARVING ARTISTS' MARKET." The
sult: Until interactive-TV programm
is ready for prime time, content com
nies are paying the rent and hon
their skills in computer games or
ROMs for multimedia PCs. They call
ROM the "training wheels" for the int
active-TV programming of tomorr
But it's a tough market. The popula
of edutainment
grams is pumping
growth, but CD-R
are only a $450 mil
business, tiny compa
with video games.
it's a tough way to e
a buck: Dataquest
says that one-third
all CD content com
nies have revenues
less than $50,000
year, half of them
in less than $125,0
and only 5% make
million or more.
serves Dataquest
lyst Bruce Ryon: "T
is still a starving
ists' market."

It could get wo
The cost of develo
the more novel inte
tive content is ris
along with the qua
Creating traditional
eo games with cart
like characters c
$50,000 to $150,000.
developing the new
re of programs—v
movie-like produc
values—can run $250
to $2 million.

Still, a hit can
duce a fortune.
game *7th Guest*, by Virgin Interac
Entertainment, cost more than $1 mi
to produce. More than 450,000 copie
the electronic novel-cum-adven
game, based on the tale of a homic
toymaker by horror writer Matthew

PHOTOGRAPHS BY ALAN JOHNSON

DEALERS IN DIGITAL 'CONTENT' : A SAMPLING

'STAL DYNAMICS (Palo Alto,) Creating interactive rtainment for CDs. Has name investors, including D and King World Produc- s. Headed by Strauss Zel- , former president and f operating officer of ntieth Century Fox.

ERACTIVE NETWORK (Sunny Calif.) Pioneering a TV set- hat allows viewers to ract with sports, games, and news shows. Backers include NBC, Tele-Communications Inc., Gannett, and A.C. Nielsen. Has a deal to supply programs for Sony Pictures Entertainment Group and for the Game Show Channel, owned by Sony, United Video Cable Ventures, and Mark Goodson Productions.

PARAMOUNT INTERACTIVE (Palo Alto, Calif.) Paramount Communications unit has an agreement with AT&T to create interactive-TV programs. Also has a deal with Tachyon, an Oakhurst (Calif.) software company, to adapt *Star Trek: Deep Space Nine.*

SANCTUARY WOODS MULTIMEDIA (Victoria, B.C.) Produces CD-ROMs . Working with Miller-Pickering Syndications on interactive comedy, including titles with former *Saturday Night Live* star Dennis Miller.

SPECTRUM HOLOBYTE (Alameda, Calif.) Has license from Paramount Pictures for games based on *Star Trek: The Next Generation* and a deal with Edison Bros. of St. Louis to develop virtual-reality games.

VIRGIN INTERACTIVE ENTERTAINMENT (Irvine, Calif.) Creator of CD-ROM hit *7th Guest.* Has teamed with Warner Bros. Consumer Products and Disney Software.

, have been sold. That, say ana- means gross revenues of $15 mil- o $18 million for Virgin. "The eco- es can be spectacular," says Mike es, screenwriter of *Rising Sun* and founder of Rocket Science Games. king in Silicon Valley is not unlike ing in the Klondike, except fewer e have guns. I like that gold-rush ier mentality."

nother big seller is Medio Multime- nc.'s *JFK Assassination: A Visual tigation.* A likely model for interac- TV documentaries, the disk lets you re the events of Nov. 22, 1963. You oam through a digitized version of Zapruder film, examine computer ations on bullet angles, and peruse ext of the Warren Commission or ook *Crossfire* by Jim Marrs. Medio more than 3,000 copies a month, the Redmond (Wash.) company s to follow with a CD on Dr. Martin er King Jr.

G FLIPS. If there's a pattern to the hits, it may be the way they blend y and fantasy. They use digitized ge of real actors and settings wov- o stories rich in character develop- and complex plots, all accompa- by original music. Then, they add uterized animation, special effects, imulation.

xe Virgin's next project, code- d *Greed.* To make this action/ad- re CD-ROM more realistic than con- onal animation, Virgin has hired x-person stunt team from the mo- *tman Returns* and is filming them st a blue screen, doing extraordi- eats and flying flips. ompany has budget- million and is in with Hollywood ac- tars for the proj- escribed as a sci- iction tale with lic elements à la *na Jones.* Says lent Martin S. Alper: "We are in the movie business. People just don't recognize that yet."

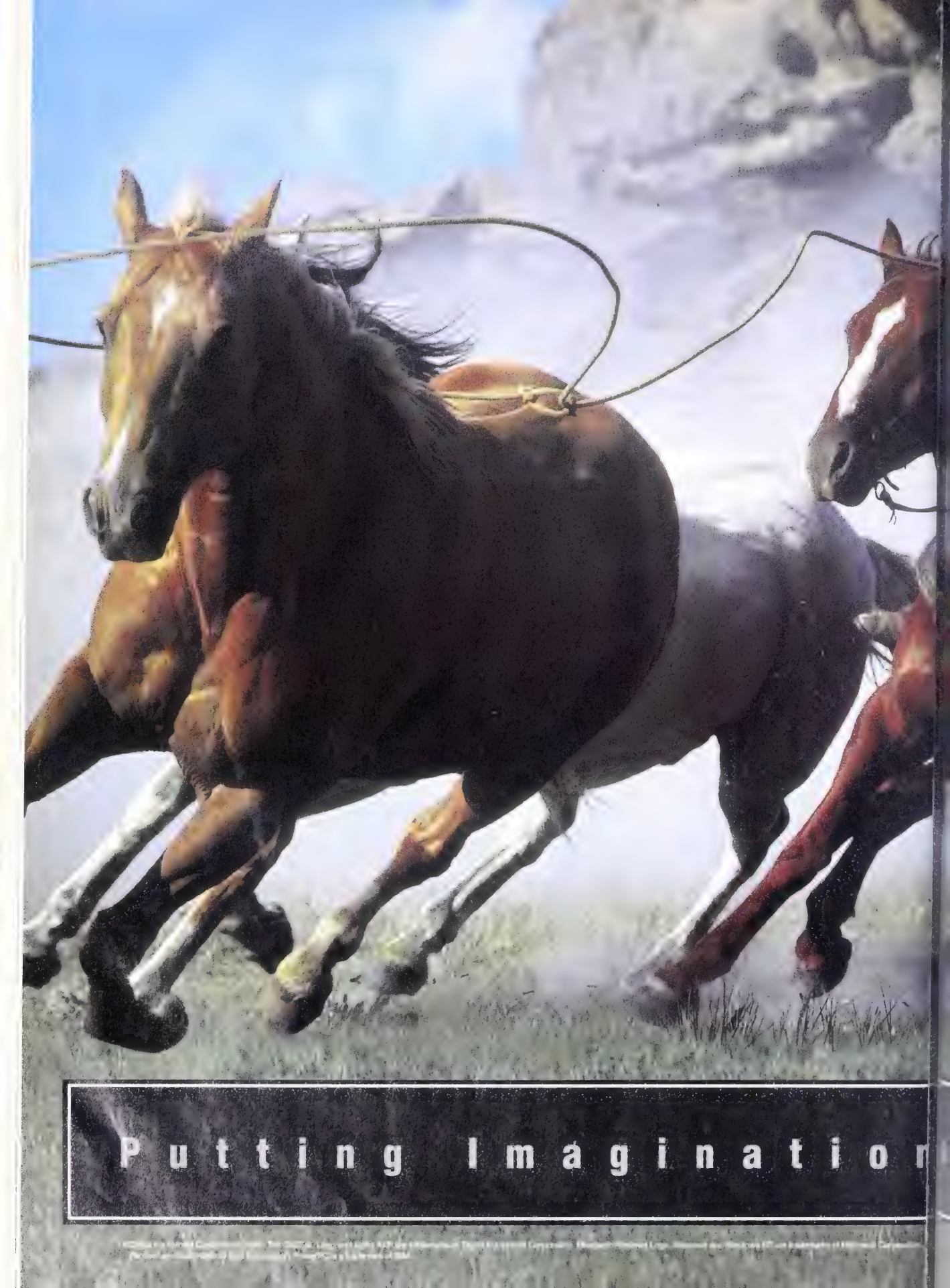
Some of these pseudomovies are whimsical, including *The Horde*, in which Cameron carries out a Monty Python-esque struggle to defend his medieval realm against monster-like "hordelings." Others are dangerous adventures such as *Critical Path*, the tale of Kat, a gutsy, female helicopter pilot trapped in a post-apocalyptic prison factory. Others simulate real-life adventures—like batting in the big leagues in Fathom Pictures' *ABC Sports Presents Power Hitter.* And some are simply funny, as in Electronic Arts' *Twisted*, an MTV-ish spoof of a game show, hosted by Twink Fizzdale.

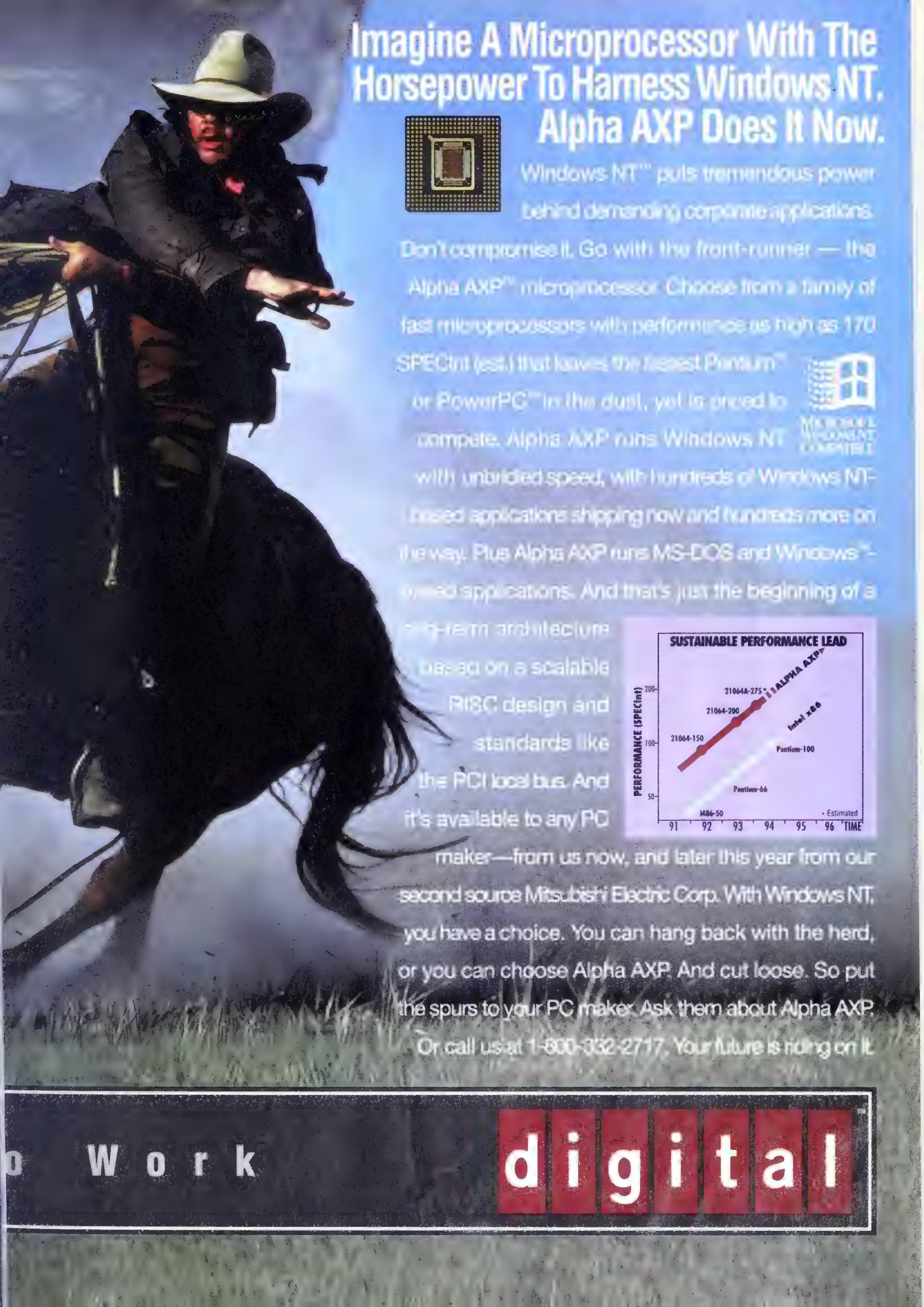
The ideas are as surprising as the pioneers themselves. Take Pop Rocket. In the early 1980s, Joe Sparks and Carmical played together in the Agents, a rock band. In 1987, Sparks got a job creating 3-D graphics at Paracomp, an early multimedia company, and later co-designed the CD game *Spaceship Warlock.* Carmical worked as a recording engineer and at Atari wrote "bloopy, farty music" for a couple of video games.

Then in 1991, they both saw the coming opportunity in "new media" and pooled their talent, their money, and dreams. The result is *Total Distortion*, a surreal game in which the player becomes a music-video producer. Traveling to the Distortion Dimension to create or collect "media treasure"—video clips, stills, song snippets, lost record-

CRYSTAL DYNAMICS INC.
Strauss Zelnick left Twentieth Century Fox to form this "interactive studio," maker of adventure game The Horde

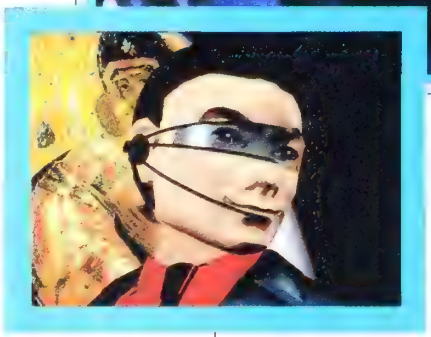
PHOTOGRAPH BY ANDY FREEBERG


Putting Imagination


Imagine A Microprocessor With The Horsepower To Harness Windows NT. Alpha AXP Does It Now.
Windows NT™ puts tremendous power behind demanding corporate applications. Don't compromise it. Go with the front-runner — the Alpha AXP™ microprocessor. Choose from a family of fast microprocessors with performance as high as 170 SPECint (est.) that leaves the fastest Pentium™ or PowerPC™ in the dust, yet is priced to compete. Alpha AXP runs Windows NT with unbridled speed, with hundreds of Windows NT-based applications shipping now and hundreds more on the way. Plus Alpha AXP runs MS-DOS and Windows™-based applications. And that's just the beginning of a long-term architecture based on a scalable RISC design and standards like the PCI local bus. And it's available to any PC maker—from us now, and later this year from our second source Mitsubishi Electric Corp. With Windows NT, you have a choice. You can hang back with the herd, or you can choose Alpha AXP. And cut loose. So put the spurs to your PC maker. Ask them about Alpha AXP. Or call us at 1-800-332-2717. Your future is riding on it.

EIDOLON INC.

Sculptor Yoni Koenig helped create "intelli-tainment" game Millennium Auction, a sleek world of art and high finance



ings—the player tries to make a hot music video. Says Pop Rocket President Joe Sparks: "This is rock music and capitalism and adventure all wrapped together."

It also is expensive. *Total Distortion*, due out this summer, has cost the tiny startup $250,000. After emptying their bank accounts and tapping relatives, the founders obtained cash advances from business partners, such as Electronic Arts, which will distribute the title. What if *Total Distortion* doesn't hit the top of the CD-ROM charts when it's released in August? Not to worry, says Sparks. "Our skills in CD-ROM are going to transfer to interactive TV. One day, there will be a Pop Rocket TV channel."

Such bravado is the cultural norm in San Francisco's so-called multimedia gulch, where dozens of content startups have clustered. Just look at Mechadeus. Husband-and-wife team John Evershed, 34, and Deirdre O'Malley, 30, spent three years building their business, Mondo Media, around multimedia presentations for corporate clients. In 1991, they decided to go into entertainment and launched Cyberdog Studio, which they later renamed Mechadeus.

FIRST, THE LAWYERS. To get movie-quality stunts on the cheap for its first opus, *Critical Path*, Mechadeus created a computer-generated helicopter using a toy replica of an Apache. Eileen Weisinger, who had a bit part in *Basic Instinct*, took the role of Kat, the helicopter-pilot heroine. Friends and associates of Evershed and O'Malley filled other roles. The first two men killed are Mechadeus lawyers. Kat's nemesis, an evil general, is played by a former executive at Media Vision, which is distributing the disk. Says Evershed: "We're not making $30 million pictures here—yet."

Rocket Science Games is spinning equally ambitious dreams. From its base in Palo Alto, Calif., it has blended Silicon Valley and Hollywood skills. Rocket's president, Steven Gary Blank, was a vice-president at MIPS Computer Systems and SuperMac Technology. Executive Vice-President Peter Barrett, previously of SuperMac, wrote Cinepak, a CD-ROM compression standard. Programmers include a bunch of Apple Computer whizzes who created QuickTime, a program for using video on personal computers. The remaining co-founders hail from Tinseltown: Backes, who was the technical adviser on *Jurassic Park*, and Ron Cobb, who worked as the conceptual designer on *Alien*.

Rocket Science's goal: becoming "big players" in interactive TV by creating compelling stories that emphasize characters and "give you a kinetic, hang-on-to-your-socks ride," Blank says. The first, due in September, is *Loadstar*, the tale of Tully Bodine, a grizzled but endearing "space trucker" played by actor Will Patton. Actor Ned Beatty also has a role in the story of Bodine's last run—with a cargo of genetically engineered camels—involving crooks, black holes, alien attackers, and space cops. The production cost: $750,000.

But isn't this just a fancy video game? Absolutely not, says Backes: "What we're doing is creating a rich environment and peppering it with rich and cunning discoveries. We want to invoke a lot of the same emotions movies do, like fear and hope."

Creating such compelling content will be key to attracting a broad audience of adults. Eidolon's *Millennium Auction* has no time warps or space critters. The player, on the trail of famous artwork and cultural artifacts such as Bill Clinton's saxophone, wanders through sleekly realistic worlds of auction houses and galleries designed by Yoni Koenig, a 26-year-old Israeli sculptor. Picking up clues and snippets of gallery talk, the player tries to corner the market.

Making that all [illegible] smooth and easy is incredibly difficult. Interactive content crafters are striving to create cinematic experiences, while giving the viewer a role in what's happening. But there's a risk that when the viewer participates, the action slows. Should Tully Bodine jettison the cargo and head to Mars or try to expose a theft ring? Should you bid on the Picasso in *Millennium Auction*? Each decision takes the plot in a new direction. If the "branching" is seamless and the story remains fast-paced, the experience is engrossing. If not, the player quickly activates the eject button. "I want the sense to come right through the glass—whether that glass is a TV or a computer monitor—and involve the audience," explains Media Vision's Cornyn, a 20-year veteran of Hollywood.

ADRENALINE RUSH. It's a big challenge. "There are all these big editing possibilities in the sky," says Jeff Cretcher, a 30-year-old former filmmaker and founder of gamemaker Luminaria. "What's behind door No. 1? Or 10 different doors?" Luminaria's *Wrath of the Gods* CD employs 60 actors and 300 different backgrounds in order to come up with hours of playing time. But when it all clicks—when the plot and the graphics and the action and the sound all come together to form a new kind of multimedia experience—digital pioneers see a bright future.

It's that glimmer of a fresh medium capable of grabbing the audience by the adrenal glands that keeps attracting the talent. It's why Clive Barker, who wrote and directed *Hellraiser*, is now writing original horror CD-ROMs for Virgin Interactive. The first, *Ectosphere*, which is budgeted at $1.5 million, takes players to a virtual spirit world. The material is so unusual, says Alper, that the CD script is being optioned as a movie.

PHOTOGRAPH BY ABIGAIL DEAN

now, it's downright hip to go digi-
Rocker Peter Gabriel has put out a
DM with San Francisco-based Bril-
Media. In *Xplora I: Peter Gabriel's*
t World, Gabriel gives an interac-
tour of his music, videos, even his
ife. You can mix your own version
Gabriel single or arrange with pro-
Brian Eno to call a jam session.
Gabriel: "It's exciting to change
xperience between the artist and
erson on the other end."

Former *Saturday Night Live* comedian Dennis Miller says that computers are a "pain in the ass," but he doesn't want to be left behind. He has arranged with Sanctuary Woods Multimedia, based in Victoria, B. C., to do two CDs: *Dennis Miller That's News to Me* and *Dennis Miller That's Geek to Me*. In the latter CD, Miller gives offbeat definitions of 180 computer terms. "I bought real estate at the wrong time. I was going to buy Snapple stock and didn't," he says. "This time, I want to be in the game."

The content game is sure to be a wild one. As they seek riches, Miller and other digital pioneers may find it's a little too much like their electronic fantasies—full of unexpected turns, twists, and surprising outcomes. For every pioneer that hits paydirt, there will be dozens left in the dust.

By Kathy Rebello in San Francisco, with Paul Eng in New York and bureau reports

WHAT IS AN AD IN THE INTERACTIVE FUTURE?

Stephen Wallmark, dealer-services manager at BMW of North America Inc., has a dream: Car buyers, from the comfort of home, size up cars on the screens of computers or TVs. Don't like k? Try green. How about a vertible? Then, with a click of mouse, the serious shopper ests an appointment for a test e. Later, the dealer brings a over and, if the buyer is ly, goes on-line with a laptop o check inventory, plot leasing financing, and even fill out the erwork. This dream could e true soon, says Wallmark. h on-line services improving interactive TV unfolding, it d be common to do car shop- from the couch "well before year 2000," he says.

Just as digital convergence is lenging the worlds of enter- ment and media to come up new interactive "content," the rmation Superhighway is put- marketing and advertising to test. Many marketers already me that the plain old 30-sec- spot won't cut it. But what What's an ad supposed to do in nteractive future? As the old ways oing business give way to the dig- swirl, "things can get pretty hairy," Vincent Grosso, AT&T project di- or for interactive television. How ? Say a jeans supplier wants to rtise in a retailer's "store" in the active mall on TV. Who does the smaker buy the ad from—the re- ? Or the interactive-TV network? ve never been faced with those s of issues," says Grosso.

ien there are the ads themselves.

How will they compete with interactive content? Grosso envisions carmakers creating games to let viewers race against the advertiser's car, while the sponsor points out his model's advantages—in steering, for example. Virtual "travel safaris" with pulldown advertising menus might work for airlines, hotels, or luggage makers.

The scramble for ideas has opened the door for all sorts of new marketing approaches. Pacific Data Images in Sunnyvale, Calif., for example, has been hired to whip up the animation for an electronic version of Warner Bros. stores for tests of Time Warner Inc.'s "full-service network" in Orlando. To make TV shopping entertaining, not just convenient, PDI animators are turning Bugs Bunny and the Tasmanian Devil into store guides, showing off clothing, toys, jewelry, and souvenirs.

"RAZZLE-DAZZLE." But digital glitz isn't all there is. The true power of interactivity may lie in information, not entertainment. Paula George Tompkins, chief executive officer of The SoftAd Group, a Mill Valley (Calif.) creator of interactive marketing materials, says the most successful efforts aren't "full-motion video and razzle-dazzle ads." They're information-laden programs that help buyers make complex decisions such as choosing a car or an industrial-products supplier. SoftAd clients include Ford, Abbott Labs, and the glass manufacturer PPG Industries. Similarly, Robert M. Shapiro, senior vice-president for commercial marketing at Prodigy Services Co., says his big advertisers are financial services, auto makers, and computer hardware and software companies.

Many products may never need this information-age marketing approach and the interactive "relationship" that goes with it. "There's a relatively small number of products and services that people really want to have a relationship with," says Don E. Schultz, professor of integrated marketing at Northwestern University. "I don't particularly want to have a relationship with a plastic-garbage-bag manufacturer." That should be a relief for producers of conventional advertising—and perhaps for consumers, too.

By Jonathan Berry in New York, with Kathy Rebello in San Francisco

Motor Tren
put the ne
a car ahead

Motor Trend's 1994 Import Car of the Year.
The New Accord. A Car Ahead.

HONDA

©1994 American Honda Motor Co., Inc.

l magazine
v Accord
)f the rest.

'IT'S LIKE CLIMBING THE HIMALAYAS'

Can a Russian-born Harvard MBA save a decrepit tractor factory?

Standing in front of a meeting of 150 skeptical factory workers, Joseph Abramovich Bakaleynik is not having an easy time. The deeply suspicious Russians can't understand why he wants to be their boss. Why should a 42-year-old Harvard University MBA be keen to trade his comfortable, well-paying position at the International Finance Corp. in Washington for a $3,600-a-year job rescuing an all but bankrupt tractor factory? One middle-aged worker shouts at him: "If you have any doubts, let's settle them now!"

Bakaleynik feigns laughter but launches into specifics. Only tough measures will save Vladimir Tractor Factory, he says. He plans to trim the plant's bloated 16,000-person workforce by 34%, cut back its extensive social services, and adopt tighter accounting controls. It's harsh medicine, but Bakaleynik argues his strategy of deep cost-cutting is the only way Vladimir can remain competitive, both in Russia and abroad. "The better the price, the more we shore up our position in the market," he tells workers. His logic wins. The next day, Mar. 24, at a shareholders' meeting, Bakaleynik gets 98.6% of the votes to become the plant's general director. He takes over May 1.

ACID TEST. If Bakaleynik pulls off a rescue, he could become a millionaire, thanks to company stock options. More important, saving the plant could be one of the more dramatic turnarounds in Russia's shaky new world of capitalism. Privatized less than 18 months ago, the 51-year-old plant is choking on $3.5 million of debt. And new orders just aren't coming. Vladimir, which made 21,358 tractors last year, has operated only four of the past seven months. And when its workers are paid—as many haven't been for two months—they often get just 40% of their $47 monthly pay.

In many ways, Vladimir is a microcosm of the woes plaguing Russian industry. Although retailers, bankers, and other entrepreneurs are thriving, the acid test of whether Russia can make the transition from communism to a more market-oriented economy lies in the struggles unfolding at thousands of factories such as Vladimir. Although some plants, including Vladimir, have been privatized, Russians are finding privatization no panacea. Debt remains the biggest problem. Vladimir and other plants long depended on government orders that have dried up. To keep workforces intact, the factories have shipped products but gone without proper payment, in effect accepting IOUs. As a result, Russia's enterprises now owe each other a staggering $10 billion.

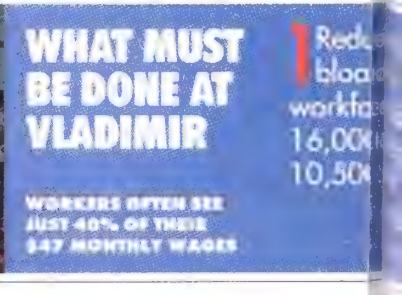
The boyish, soft-spoken Bakaleynik is no newcomer to the plant. His family moved from Siberia to Vladimir, an insular, grimy industrial town 130 miles east of Moscow, when he was 11 years old. After graduating from an elite Moscow university, he went on to serve as deputy director of Vladimir Tractor. Then, in 1990, Bakaleynik enrolled in Harvard as part of a program to train promising Russian executives in Western business practices. Afterward, he went to work as an investment officer with the IFC in Washington.

While at the IFC, Bakaleynik made an initial stab at becoming Vladimir's boss at the first-ever shareholder meeting last June. He had backing from Renova USA, a New York investment group made up of Americans and Russian émigrés, which holds 16.6% of the plant's shares. But most shareholders, many of them plant workers, voted to keep on Anatoli Grishin, a Soviet-style manager who had been director for 18 years. Grishin pledged there would be no layoffs and vowed to maintain the plant's large social-service sector, which includes

25 kindergartens, dozens of apar buildings, and three farms.

Before long, Grishin's expensive egy backfired. By last Septemb couldn't make the payroll. In Janu resigned. Grishin declined to t BUSINESS WEEK. Soon after, the board of directors contacted Bak and asked if he wanted the jo Bakaleynik, the offer was too i ing a challenge to pass up.

PALATABLE PRICE. Bakaleynik belie ports are crucial to Vladimir's su Last year, the plant sold 21% of i tor output to farmers in the U. S. da, and Mexico—its only source currency. And despite Vladimir's s edly low-tech product line, the market has potential. Belarus M turing Inc. in Milwaukee, which l the sale of Vladimir's small 31- a horsepower tractors, sells abou Vladimir tractors a year in the c



PHOTOGRAPHS BY MALCOLM LINTON-BLACK STAR

BAKALEYNIK FACES DEEP SKEPTICISM FROM AN ALREADY HARD-PRESSED WORKFORCE

J. S. market. The price makes a fference. Vladimir tractors retail $6,000 to $9,000 in the U. S. "I there's a reasonable market for for just the price-driven buyer," Robert J. Ratliff, CEO of Norcross based AGCO Corp., which makes l lines of tractors. AGCO's low-end y Ferguson tractor, which is manred in Poland, sells for $11,500. nks to small but steady exports, ir has $7 million in export re- es. And Bakaleynik hopes to build t by preserving Vladimir's price age through cost-cutting. Mean- to spur domestic purchases, he o upgrade and expand a network s-and-service distributors through- former Soviet Union. Bakaleynik ants to create a new leasing net- to offer customers easy credit perhaps with help from the Rus- nance Ministry or the European Bank for Reconstruction & Development.

But Bakaleynik's plans to boost sales at home and abroad may be doomed unless he can improve Vladimir's manufacturing capabilities. He reckons he needs $14.6 million for new equipment. About 30% of the plant's gear still dates back to the U. S. Lend-Lease program of World War II. Vladimir's boss would welcome a Western partner such as Deere & Co., which declined comment. Bakaleynik, however, admits he would also like government money—and lots of it. At a minimum, he hopes state agencies will pay their bills. That's why he supports the controversial policies of new Deputy Prime Minister Alexander Zaveryukha, who wants a $2.8 billion state bailout of agriculture.

Zaveryukha's quick rise in Yeltsin's government recently gave pause to many Western observers who see his policies as antireform and inflationary. But from his vantage point, Bakaleynik thinks Zaveryukha's approach is more realistic. For now, he doesn't support the tight monetarist approach sought by radical reformers Yegor T. Gaidar and Boris G. Federov, which could abort Vladimir's turnaround bid. Tight money can come later. "I hope Zaveryukha can get some money into the agricultural system," he says.

Vladimir's unions could also stymie Bakaleynik's strategy. It's not certain how the workers will react once he starts paring the payroll and trimming perquisites. Vladimir Tractor has never had a history of strong labor unions. But their mood is definitely not upbeat. "The majority of the people don't know what to expect. The whole country isn't working," says a middle-aged worker, who voted for Grishin in June and for the Communists in December's elections.

PENSIONERS. And morale isn't the only labor issue that Bakaleynik is likely to confront. He'll also have to deal with an aging workforce. Some workers are so elderly they literally hobble through the plant's front gates on canes. But they are kept on the payroll because inflation is so fierce many Russian retirees can barely live on their pensions. These older workers outnumber younger ones, who often are more attracted to outside work. A young person hustling Snickers bars and Chinese clothing at a sidewalk kiosk or trading booth, for example, can easily pull down $176 a month. "There are only a few young workers here—mainly pensioners," says 28-year-old Igor Belyakov, who has worked at Vladimir for six years.

All of Bakaleynik's efforts could be sunk if Russia's depression persists and products don't start moving again. He gives himself five years at the outside. So far, shareholders appear to be optimistic. "I think the situation at Vladimir has bottomed out," says Len Blavatnik, managing director at Renova. Blavatnik believes the plant may even generate a small profit of $4 million to $5 million this year. "Not huge, but reasonable for Russia in today's environment," he says.

Victory would be sweet: Factory shares now sell for $1.50, but Bakaleynik, who holds those stock options, says they could be worth 50 times that if there's a rescue. Besides that incentive, Bakaleynik uses a mountain-climbing metaphor to explain what drives him. "It's like climbing the Himalayas," he told the 700 shareholders who voted him into office. "You go up, and if you're lucky, you come down." If he can manage that feat, he'll prove there's still hope for Russia's basket-case manufacturing economy.

By Peter Galuszka in Vladimir, with bureau reports

4.6 in mod- chin- of es to r II

3 Attract a foreign investor or partner such as Deere & Co. or J.I. Case

4 Cut back the socialist-era services for workers, including schools, farms, and apartments

5 Introduce tighter credit controls on product sales to state enterprises

STRATEGIES

THIS DO-IT-YOURSELF STORE IS REALLY DOING IT

No. 2 Lowe's is out to take Home Depot down a peg

Strolling the aisles of the newest superstore in Greensboro, N. C., recently, Home Depot Inc. Chairman Bernard Marcus was welcomed with a syrupy sweet, "Hello, Mr. Marcus" over the PA system. A sycophantic employee? Hardly. This store belongs to Lowe's Cos., the No. 2 player in the home-improvement retailing industry. That greeting to a rival resonated with an unspoken message: We aren't scared of you anymore. Lowe's Chairman Robert L. Strickland shares the sentiment. "We are going to fight them now," he vows.

Meet the new-and-improved Lowe's. Over the past few years, Strickland has expanded and rejuvenated the once-sleepy chain by opening huge retail warehouses. After opening 31 superstores that averaged over 100,000 square feet last year, Lowe's plans to build 44 this year. Strickland has been casting a wide net for shoppers by stocking his shelves with everything from drapes to televisions, while adopting such policies as daily free home delivery.

GIANT OUTLETS. Indeed, Strickland is proving that there's more than one destination for the avid do-it-yourselfer. Net earnings for the North Wilkesboro (N. C.)-based Lowe's could climb 42% in 1994, to $187 million, says analyst Lynn C. Sawyer of NatWest Securities Corp., as its revenues climb 31%, to $5.9 billion. Wall Street has also noted Lowe's success. In the past year, Lowe's stock has more than doubled, to around 32 while shares in Home Depot have dropped 4%, to about 40¼ (chart). "I think people have overestimated the competitive threat that Home Depot brings," says Thomas Marsico, a portfolio manager at Janus capital, which owns shares in both Lowe's and Home Depot.

Lowe's hasn't always done so well. Formerly nicknamed "Slowe's," the company had built its business selling lumber and supplies to contractors. And for a long time, it ignored the booming market of cost-conscious do-it-yourselfers. Its stores were small, and their shelf space and service were limited. By contrast, as Home Depot expanded from 4 to 190 stores in the 1980s, Lowe's went out of its way to woo hardware-challenged consumers. It opened giant outlets and staffed its stores with trained craftspeople to answer queries on subjects from plumbing to house painting.

Before long, Strickland, 63, and a 37-year veteran of Lowe's, saw the handwriting on the drywall. By 1991, Lowe's sales were growing by only 8% a year, vs. 35% at Home Depot. So he embarked on a radical plan. At the end of 1991, he took a $71 million pretax charge against earnings, to start consolidating small stores. His goal: to double the size of Lowe's to 600 stores by the end of the decade. Virtually all will be warehouse outlets. By limiting Lowe's expansion to small cities and towns in the Southeast, Strickland has so far avoided going head-to-head with Atlanta-based Home Depot, which plans to have 840 stores nationwide by 1998.

Strickland also set out to broaden Lowe's appeal beyond the toolbelt-and-T-square set. He has expanded his stores' product offerings over the past years from 14,000 to some 40,000 including an array of appliances and electronics that Home Depot has traditionally shunned. Lowe's has also extended Home Depot-style service to the decorating arena. Most of the outlets now have boutique sections where customers can match paint, wallpaper, vertical blinds. "Lowe's has found a niche Home Depot is not serving," says a consultant who has worked for both.

Lowe's still faces huge hurdles. So far, it has spent more than $900 million on expansion. Much of that was borrowed, which pushed its debt-to-capital ratio to 40%. To help fund further expansion, Strickland says he will consider an equity offering. Then there's the competition. In January, Home Depot opened a second Expo Design Center to test sophisticated, decorator-quality merchandise. And, by 1995, the chain will open 37 stores that compete in the same markets as Lowe's. "We're going to try to knock their block off," says Home Depot's Marcus.

Strickland says he's ready to fight back. He recalls how Home Depot drove his store out of Atlanta in 1984. "We haven't gone back—yet," he says with a wink. It may be just a matter of time before Marcus finds his name etched through another Lowe's superstore—this time much closer to home.

By Maria Mallory in North Wilkesboro, N. C.

STRICKLAND: FROM 14,000 PRODUCTS TO 40,000

"In my business, I've got too much on my plate to worry about long distance service."

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BOXING

THE FAMILY THAT PROMOTES FIGHTS TOGETHER...: DANNY, KATHY, AND LOU DUVA

THESE DAYS, THE DUVAS ARE THE MAIN EVENT

Top fighters and TV savvy have made them knockout promoters

It wasn't so long ago that flamboyant promoter Don King lorded it over the sport of boxing while Danny Duva set up folding chairs in bleak high-school gyms in New Jersey for his dad's "club fights." Danny often made more money hawking beer and hot dogs than his dad took in at the gate.

But with the imprisonment of heavyweight Mike Tyson in 1991, Don King has gone from brash bobber to tired canvasback. Current undisputed heavyweight champ of the fight game is Danny Duva's all-in-the-family firm, Main Events.

Main Events now boasts a stable of 25 pugilists, including nine world champions. On Apr. 9, Duva watched client Pernell "SweetPea" Whitaker retain his welterweight title with a victory over Santos Cardona. Less than two weeks later, on Apr. 22, clients Evander Holyfield, the first fighter to gross more than $100 million, and Michael Moorer were set to duke it out for the world heavyweight title. Then, on May 6, clients Lennox Lewis and Phil Jackson climb into the ring in yet another major heavyweigh' bout.

For the Duvas, these three fights, which are expected to gross $60 million, are something of a roundhouse punch. Their five fighters will earn $25 million. Main Events will net about $2.5 million. "It's no different than producing a movie or a TV show," says Duva. "You take the financial risk and put all the elements together."

NO SWEAT. Since Duva often represents both fighters in the ring, critics accuse him of conflicts of interest similar to those that plagued Don King. Duva doesn't sweat it. "I find a lot more conflicts in the entertainment business than in boxing," he says. He notes that superagent Michael Ovitz may represent people on every side of a Hollywood movie deal, "yet he's not in conflict. He's a genius."

Some boxing insiders say the same of Duva, 42. He certainly lacks the rip-roaring panache of Don King, whose most famous fighter won't get out of stir until next spring, or the frenetic energy of Bob Arum, handles George Foreman others. But Duva bring businesslike savvy to a tal, often chaotic sport. never wings it," says G. Abraham, presiden Time Warner Sports, has been across the t from Duva. "In a busi that is illogical, Duva br great logic," says Abrah "And he doesn't roll over a nickel."

Main Events is an Ita family affair. Danny's fat Lou, 71, is a onetime b with a cratered face a shock of white hair. D wife, Kathy, 40, dubbed Mout'" by Lou becaus her garrulity, is the gr marketer. Brother Din the accountant, while s Donna arranges travel. other sisters, Deanne Denise, are the company's bookke and receptionist, respectively. A r and a cousin also work in the shop.

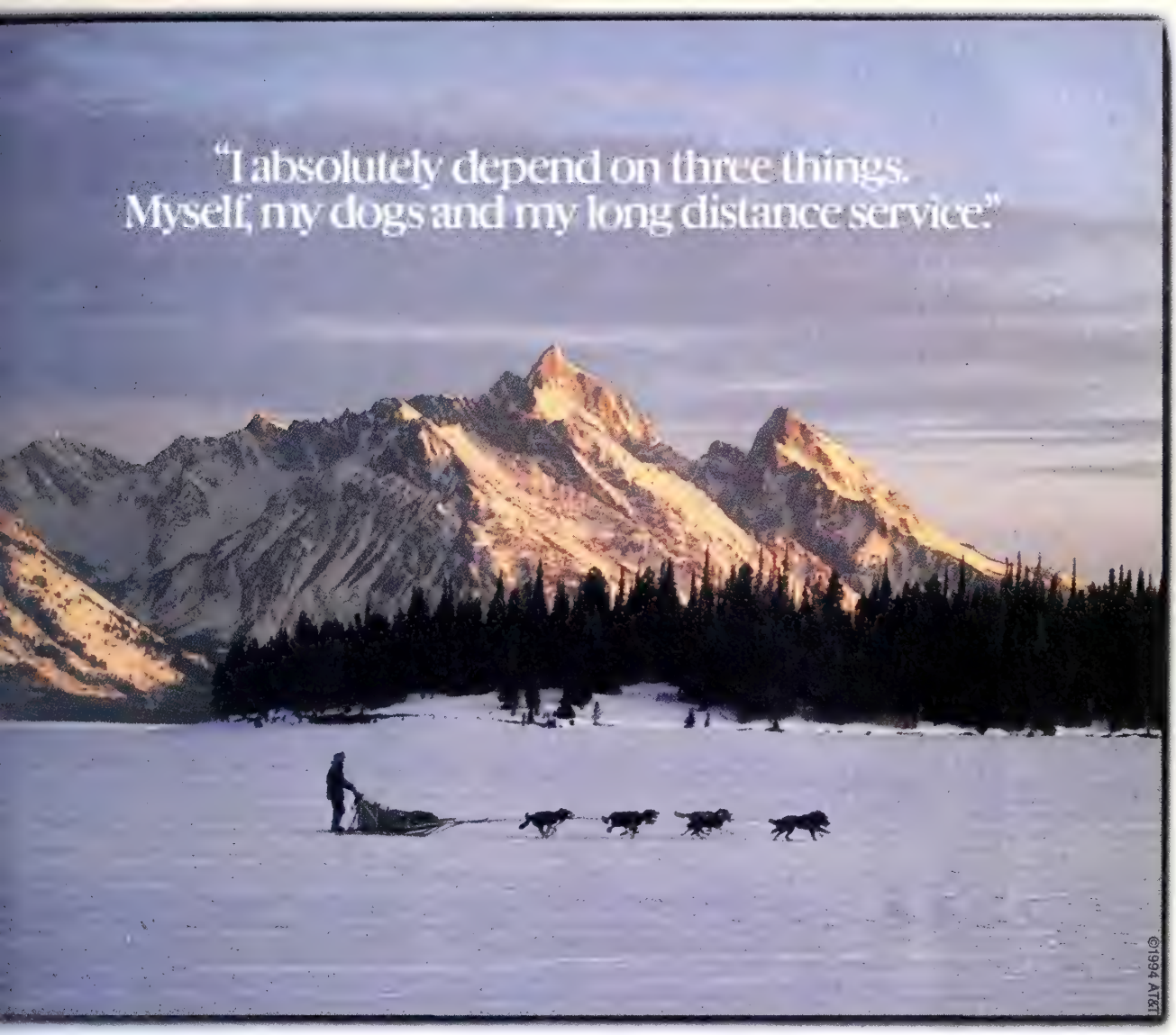
CROWD CONTROL. Duva got his e schooling in the sweet science ar the family dinner table in Totowa, Lou, former president of a Jersey T sters local, fought professionally years, his scarred mug and crooked evidence of a less-than-successful career. He later turned trainer, man and promoter of local fights and figh

More than once, Duva saw his fa keep a boxing match from becomi riot. Just hours before one bout, had to dry out one drunken palooka bail out another. On another occasi fighter ran off in fear after seeing opponent: Lou replaced him with s one from the crowd. has since helped t and manage 13 w champions.

So Danny k what it takes for a er to make it big heavyweight fighte to be a cross bet Darth Vader and M Johnson," he says. has to be a killer a destroyer in the ring but have a c matic personality outside it."

Duva graduated from Seton Hall versity with a law degree in 1977 joined a small law firm in Newark, Before he passed the bar exam, h ther landed him a key client: Barnes, manager of fighter Leon Sp Within the year, Spinks defeated h

> PAY-PER-VIEW—FROM BOXING TO HOWARD STERN—IS A GOLD MINE FOR THE DUVAS



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weight champion Muhammad Ali, and Duva enjoyed a six-figure payday. From then on, when he wasn't handling real estate closings or divorce settlements, Duva was promoting fights.

He paid $100,000 for the closed-circuit-television rights to a Roberto Duran-Sugar Ray Leonard fight in 1980. The TV deal made $500,000, and the Duvas got 40% of that. Leonard, whose major fights were promoted by Arum or Don King, took notice. "We became the alternative to Don King and Bob Arum," says Duva.

Anxious to land Leonard, Duva boldly offered him an $8 million guarantee to fight Thomas "Hitman" Hearns in 1981. "We had $50,000 at the time," recalls Kathy Duva. "Our attorney said, 'This is the most underfinanced Ponzi scheme I've ever seen.'" Duva scrambled to piece it together, coaxing $3 million out of Caesars Palace to stage the fight and an additional $1 million from Home Box Office for the delayed broadcast rights. When it was all over, Leonard collected not only his guarantee but an additional $4 million. Duva pocketed $1.5 million, and Main Events was in the big time.

For four years running, Main Events has been the promoter or co-promoter of the largest-grossing pay-per-view events. Among them: Holyfield's fight with Foreman in 1991, which grossed about $58 million, the most ever for a sports event, and Howard Stern's tacky New Year's Eve show last Dec. 31, which grossed some $14 million—highest ever for a nonsports pay-per-view extravaganza.

"EVERYBODY SUES." Having so many top fighters in their corner still provokes some heckling. Two years ago, Holyfield publicly accused the Duvas of conflict of interest. The spat threatened to break up the partnership between Main Events and its most lucrative fighter, but it was quickly patched up. "It's like a marriage," says Duva. "If you work with someone for 10 years, you have disputes. He misunderstood the terms of a deal we made with Riddick Bowe. If not for that contract . . . Holyfield wouldn't be champion today."

Still, Rock Newman, Bowe's manager, dubs Duva a "walking, breathing conflict of interest." Newman filed a $25 million lawsuit against Duva and Main Events last year, alleging breach of contract. The suit was settled out of court. Duva shrugs off the episode. "Boxing is the Wild West," he says. "There are always lawsuits going on. Everybody sues everybody."

Whom does he root for when both fighters in the ring are under contract to him? "I root for the gross, and let the best man win."

By John A. Byrne in Totowa, N.J.

Legal Affairs

CORPORATE GOVERNANCE

BOARDROOMS: THE TIES THAT BLIND?

An attack on directors with professional links to their compan s

It has been more than a year since Weirton Steel Corp. employees began their uphill battle to oust Harvey L. Sperry from Weirton's 13-member board. But in a dramatic showdown on Apr. 13, the employees, who own 77% of the company's stock, finally got their way. Sperry withdrew his renomination bid to avoid a threatened war over a vote on a vital stock offering at the May 26 annual meeting.

Why all the fuss over Sperry, a well-respected 64-year-old attorney who has served the steelmaker since 1984, both as lawyer and director? Conflict of interest, employees charge. It was bad enough that Sperry's law firm, Willkie Farr & Gallagher, was collecting more than $1 million a year to handle Weirton-related matters. But at the same time, the firm represented about 20 foreign steelmakers—sometimes in trade disputes against Weirton. "It's hypocritical to represent both sides," says Frank Slanchik, president of the Employee Shareholders' Assn. "If we're going to have an independent director, we want one who's really independent."

CEO Herbert Elish, reversing months of unwavering support for his longtime confidant, seems to agree. "If they're getting substantial fees from management, they can't be independent," he says. Weirton will now abide by a policy that bars anyone with financial ties to Weirton from serving on its board. "The objective was to put the company into a position where the parties could join together to seek approval of issuing common stock," says Sperry, noting that "conflicts arise all the time" when firms as large as his represent so many different clients.

What happened at Weirton is a sign of the times—a likely preview of w to come for many companies tha tinely name their trusted law bankers, or business advisers to torships. For years, companies been under fire to get corporate in off their boards. But as the 1994 season swings into high gear, the h on from shareholder groups, court ulators, and insurers to do the sar so-called affiliated directors who d ness with the companies they ser

eady, companies such as Time
er Inc. and Salomon Brothers Inc.,
intense pressure from disgrun-
utsiders, have unraveled the close-
ircles they once cultivated. Should
ıovement gain momentum, the im-
could be immense: A review of
roxy statements by the Investor
nsibility Research Center, a group
ollows shareholder issues, shows
ıore than half of the companies in
tandard & Poor's 500-stock index,
ing Motorola, Occidental
eum, and Coca-Cola, have direc-
hom they also tap for professional
es. "This is where the law is go-

ays Harvey L. Pitt, a lawyer who
s boards. "The burden on directors
ofessionals is going up."

compelling reason: lawsuits.
ly 300 U.S. companies last year
ıit with 713 claims against direc-
nd officers—23% more than just
ears ago, according to a study re-
in February by Wyatt Co., a
ıgton consulting firm. Companies
ıore than $1 billion in assets ex-
ed the greatest jump, with claims
up 53% since 1987. The survey's author, Phillip Norton, predicts that one in four companies will face board-related litigation this year, much of which will include conflict-of-interest issues.

HILLARY'S HAUL. At the heart of these and other actions is the belief that some directors are simply too cozy with management, either because of personal loyalties or their reliance on company-related business, to be independent. Exacerbating the problem, critics say, is that the public is often in the dark about how much directors or their firms are paid for professional services, since companies aren't legally required to disclose fees unless they exceed 5% of a director's firm's gross revenues.

When they do, it can raise red flags. Hillary Rodham Clinton, for example, has been criticized for using her board seat at TCBY Enterprises Inc. to steer $1.2 million of business to the Rose Law Firm in 1991-92. "If you have a self-interest then, by necessity, you can't be looking after shareholder interests with the proper degree of objectivity," says Melvyn I. Weiss, a lawyer who represents shareholders.

Many executives don't see it that way. They argue that affiliated directors pose little risk of conflicts and instead offer valuable insights into the running of the companies they serve. Besides, taken to its extreme, the notion of directorial independence would all but eliminate some of the most qualified candidates. Says Curtis H. Barnette, CEO of Bethlehem Steel Corp., which employs the law firms of two of its directors: "It would be regrettable indeed to preclude people from rendering important service because of a personal relationship with the company."

Regrettable, maybe. But the courts are beginning to suggest otherwise. In the tussle for control of Paramount Communications between Viacom and QVC Network, the Delaware Chancery Court blasted Paramount's 14 directors last November for virtually rubber-stamping the wishes of Chairman Martin S. Davis, who backed Viacom, without adequately assessing QVC's competing bid. "The board simply followed management's lead in rejecting the unwelcome offer," the court wrote. A possible explanation for directors' alleged passivity is their ties to Davis or the company. One director was a partner at Lazard Frères & Co., Paramount's investment advisers; two were Davis' longtime friends; and three were Paramount employees. The ruling ultimately cost Viacom almost $2 billion more for the deal.

Regulators and institutional investors are also getting into the act. The Internal Revenue Service, under a tax law enacted this year, states that any director receiving compensation from a company above minimally-set amounts, are not independent, thus precluding companies from claiming certain tax deduc-

COLES AND ALLEN OF STONE & WEBSTER DEFEND THEIR INSIDERS

tions. The New York Stock Exchange doesn't consider directors independent if they simultaneously act as advisers, consultants, or lawyers for a company on an on-going basis. And the Teachers Insurance & Annuity Assn.'s College Retirement Equities Fund (TIAA-CREF) recommends that not only should boards consist of a majority of independent directors but that key committees have only unaffiliated outsiders.

Under TIAA-CREF's standard, a company such as Occidental Petroleum Corp. wouldn't pass muster. Of its 13 directors, 8 are either directly employed by the company or receive fees for professional services. Director Louis Nizer's law firm collected $12.5 million in the last two years. Arthur Groman's law firm received $4.7 million. As for Occidental's compensation and nomination panels, Groman chairs them both. Occidental did not return calls.

Such corporate behavior raises concerns about independence. "You need to have people who ask the critical questions," says Richard H. Koppes, general counsel of the California Public Employees' Retirement System, the powerful institutional investor. After complaints

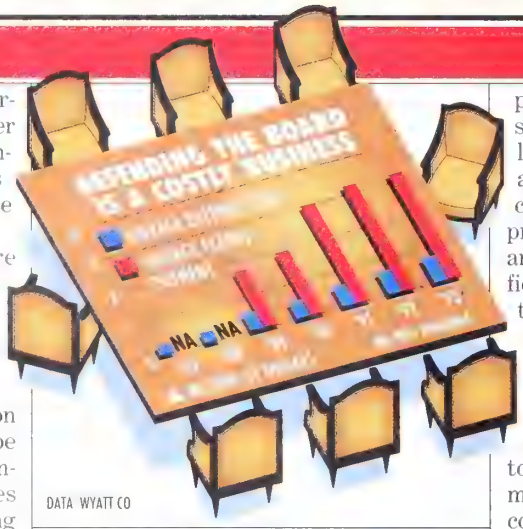
from CalPERS and others about an overall lack of accountability, Time Warner has gone from having a majority of insiders and affiliated directors on its 15-member board to just two corporate insiders and no affiliated directors.

Now, institutional investors are proposing resolutions to force Advanced Micro Devices Inc. to appoint more outsiders to its six-member board and only outsiders to key committees. The plan would eliminate CEO W. J. Sanders III from the four-person nominating committee and possibly Joe L. Roby, a managing director of Donaldson, Lufkin & Jenrette Securities Corp., and R. Gene Brown, a managing director at the economic consulting firm of Putnam Hayes & Bartlett Inc. (Both firms have worked for AMD.) The company opposes that proposal, and the one for more outsiders on the board, arguing that the definitions of what constitutes an outsider are too restrictive. Besides, AMD is planning to expand its board by two members, which it says would give outsiders a five-to-three majority.

Most companies echo AMD's position. Michael D. Eisner, chairman and CEO of Walt Disney Co., maintains that any conflict arising from Director Robert A. M. Stern, a prominent architect who has been on the board since 1992 and has earned $2.3 million from the company in the past three years, could be easily handled within Disney. Stern has worked on several multimillion-dollar Disney projects, including a Wild West hotel at EuroDisney. "He's an extremely talented man, and it would be foolish not to use his talents for the benefit of this company," says Eisner, noting, however, that Stern is unlikely to get new Disney contracts while on the board.

MUCH ADO? AMR Corp., with three affiliated directors on its 13-member board, says it has no intention of booting anyone just because critics don't like the way it looks. "You could create a situation where no one but retired people and people from nonprofits could sit on your compensation committee," says AMR's Al Becker.

Like the companies, many directors believe the current furor is overblown. Lester Pollack, a Paramount director and a partner at Lazard Frères, the adviser on the Viacom deal, says conflicts are easily avoided. "When it becomes an issue of conflict, one abstains from the potential conflict," says Pollack, adding that his link with Lazard never impeded his ability to be independent on merger-related matters.



Such self-policing generally goes unchecked—so long as companies remain profitable. But when trouble begins brewing, perceived conflicts can pose serious liability problems. "When I see a board not doing its job, these are the first things I look for," says shareholder activist Nell Minow, a principal with LENS Inc., an investment firm in Washington.

LENS is now on the warpath against Stone & Webster Inc., a New York-based engineering and construction firm that LENS believes is underperforming in part because it relies too heavily on insiders to govern the company. Among the 12 directors are three insiders and at least two affiliated directors, including Fred D. Thompson, who earned $134,000 in legal fees in 1993, and Kent F. Hansen, a Massachusetts Institute of Technology professor who made $61,000 in 1993 for consulting. "It's a question of where you stand and where you sit," says Minow. "And we want these people to sit a little farther apart."

William F. Allen Jr., Stone & Webster's chairman, concedes that his company isn't performing as well a
should. But he says the cause is u
lated to the board's makeup. "We
agree that some magical change o
corporate board will make the com
profitable," says Allen. Moreover, A
and President Bruce C. Coles have
fidence in the autonomy of these d
tors—a belief that has led them t
ject LENS' requests for alteri
candidates for directorships.

While Stone & Webster battl
out with LENS, some companies
surers, and trade groups are m
to address the conflict-of-interest d
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couraging professionals from servi
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ACTION WITHIN. Even directors are
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John M. Nash, president o
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General Motors Corp. in M
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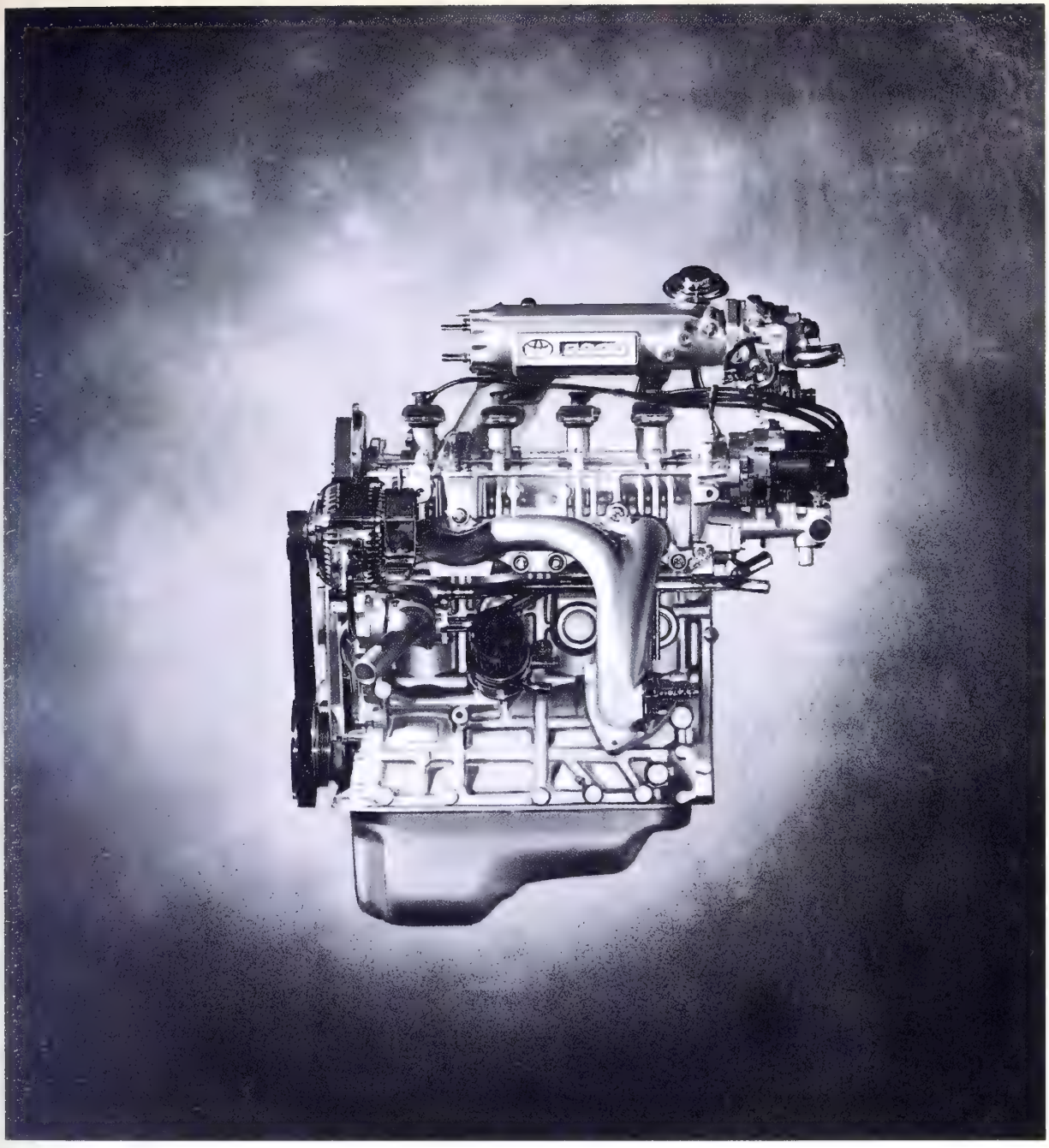
more forthcoming about their t
their directors, shareholders and
will be hard-pressed to tell how b
cial—or detrimental—these relatio
can be.

MINOW'S FIRM SUES BOARDS THAT SEEM CLUBBY

*By Linda Himelstein in New
with Stephen Baker in Pittsburgh,
Grover in Los Angeles, Robert D.
San Francisco, and bureau reports*



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MARKETS

WHIPLASH IN EMERGING MARKETS

Tighter money reins in speculation and has bond prices plunging

When Brazil completed a deal to restructure $52 billion in foreign loans on Apr. 15, many observers were a little too quick to pronounce the end of the Latin American debt crisis. While the pact was a big achievement, debt troubles in Latin America and other emerging markets are far from over.

The reason: the recent sharp plunge in emerging-market debt and equity prices throughout the world, precipitated by the Federal Reserve Board's hike in interest rates on Feb. 4. The Fed's move effectively punctured a huge speculative bubble that had buoyed emerging markets far beyond reasonable levels. Throughout the developing world, liquidity has dried up, burned investors have run for cover, and financing deals have been postponed.

SLOW MEND. The psychology has shifted dramatically from euphoria to a sober realization that emerging-market dealings can be much more hazardous than was once thought. Investors and dealmakers have gained a new appreciation of political and market risks. In this climate, there are few signs that market prices will recover to 1993 levels anytime soon.

The impact of these developments will be painful from Beijing to Buenos Aires. Raising capital will become more difficult for thousands of companies in emerging markets. "It will be much more expensive to borrow from abroad," says Lawrence Krohn, chief economist for Latin America at Lehman Brothers Inc. "A lot of the projects won't get done, and that's going to slow future growth."

The flow of deals has already ebbed—and that is costing Wall Street dealers plenty of money. Says Arthur E. Byrnes, chairman of the New York money-management firm Deltec Asset Management Corp.: "I used to get several faxes a day [inviting Deltec to participate in upcoming deals]. I don't get any faxes these days." If companies defer or cancel huge planned investments in productive equipment, they run the risk of leaving themselves stagnant and inefficient at a time when their countries badly need private-sector growth.

The change in sentiment is most pronounced in Latin America. In January, market watchers predicted there would be more than $8.5 billion in new Eurobond offerings from Latin America in 1994, with $3.1 billion coming from Brazil alone. But the actual volume will be far less. Already this year, the giant state oil company Petrobrás postponed a planned offering. José Berenguer, capital markets director at ING Bank in São Paulo, estimates that close to 15 Brazilian Eurobond deals worth at least $1 billion are on hold.

The slowdown is equally dramatic in Mexico, where two dozen planned bond offerings totaling $6 billion face an uncertain future. Although Mexican issuers placed more than $1 billion in new debt in January, new-issue volume has subsequently fallen, and the only offer since mid-March have been for sover issuers, according to Salomon Brothers Inc. In recent years, many aggressive Mexican companies have obtained as much as 90% of their debt in dollars, according to Hugo Jaime Garcia, corporate financing director at Monterrey-based Vitro. But Vitro, taking a conservative tack, has eased away from international bond markets over the past year. Even cement giant Cementos Mexicanos, which issued a record-setting $1 billion Eurobond last year, is expected to put off major new borrowings. Says Richard D. Grant, managing director for project finance at Chase Manhattan Bank: "Right now, the public market for Latin America is dead with a capital D."

FADING PROSPECT. The weakness in emerging markets is causing some pain to even the largest, best-quality corporations. But the impact on midsize companies will be acute. Unlike their larger brethren that have the wherewithal to wait until conditions improve, these companies need money now—and they'll have trouble borrowing at home, whe short-term rates have jumped fro to 15% since January. That has pol ramifications as weil as economic according to Neil Perry, chief of res at Baring Securities Inc.'s Mexico office. "The Mexican government w to get lending rates d so that small and mi companies would make investments and c plenty of jobs before [Aug. 21 presidential] tion," he says. Now, prospect is fading.

Equity offerings are slower for Mexican co nies. Prices on U.S.-t shares of the biggest can corporations hav len precipitously. Telé de México, for exampl from 76 on Feb. 9 t on Apr. 20. And whe Pepsi bottler Grupo E tellador de México ca market recently, so close to the deal founder Enrique Molin

WHY THE DEBT CRISIS ISN'T OVER YET

SHELL-SHOCKED INVESTORS	Many investors were newcomers to the emerging markets last year, and now it appears that they came in at the top. When prices plummeted, liquidity almost vanished. New investors will be very leery.
WARY UNDERWRITERS	Investment bankers are holding back new offerings until markets stabilize. But few expect a return to last year's high level of deal flow anytime soon.
POLITICAL UNCERTAINTIES	The assassination of Mexico's leading presidential candidate has thrown the country into turmoil. Interest rates are rising, and the peso is weakening. Although Brazil reached a debt accord with banks, the prospect of a socialist winning the upcoming presidential election has made dealmakers and investors wary.

The free fall has little to do with underlying conditions: No one's writing off these nations

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75%. Moreover,
ors in Mexico are likely to shun
le equity investments when gov-
ent bond rates are in the double

en Asia's booming economies are
trouble raising cash. Chinese bor-
s will find it harder to raise money
hey did earlier this year, when
vernment issued 10-year bonds at
d just 85 basis points (one-hun-
ns of a point) over U. S. Treas-
Now, that premium has nearly
d, and the bonds are trading at
90¢ on the dollar.

dearth of liquidity in the market
en especially harmful for smaller
ies. Prices on so-called exotic debt
ations such as Peru were marked
more than a point at a time dur-
e worst of the market turmoil. In
Kong, Lehman Brothers is ru-
to have been stuck with big in-
ies of so-called Dragon bonds—
denominated bonds issued in Asia

and sold to Asian investors—when buyers disappeared in the market rout. The company says it has normal inventories of Dragon bonds and continues to trade in most bonds.

High interest rates and illiquidity aren't the only reasons for the continuing emerging-market problems. Speculation, fueled by excessive leverage, also played a big role. For example, market sources say that some investors took positions in "when-issued" Brazilian bonds. Brazil was to issue the bonds, as it did on Apr. 15, after reaching an accord with its creditor banks. The bonds were to be collateralized with U. S. Treasuries. Since the bonds were being traded only on a when-issued basis, investors were able to avoid putting up any cash. When the price for when-issued bonds rose, investors used their paper profits as collateral to buy other securities on margin. It was a great scheme when prices were rising. But when prices fell, investors got hit hard because they had to meet margin calls.

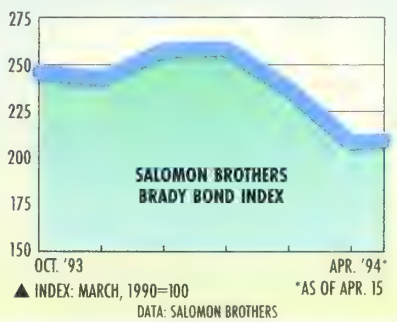
"CLEANSING EFFECT." Political volatility has also dimmed prospects for some markets. In Mexico, peasant uprisings, the kidnapping of a prominent banker, and the assassination of a leading presidential candidate have spooked investors and could curb economic recovery. And the leading candidate in Brazil's upcoming presidential election is a socialist who has pledged to undo some economic reforms.

Nobody, though, is writing off the emerging markets. Observers say the free fall in debt prices has little to do with underlying conditions in the countries. Argentina's economy continues to improve, they say, and many of the Asian economies are booming. Donald G. McCouch, of Chemical Banking Corp., says the fall in prices "has had a cleansing effect" on the market. While he expects emerging-market borrowers to continue to have to pay high rates relative to Treasuries, he expects the market to become more liquid. And no one expects the low prices to last forever. Indeed, Dana F. McGinnis, president of San Antonio Capital Management Co., has been "dramatically increasing" his holdings of emerging-market debt.

Many involved with emerging markets expect the toughest times will end soon. José Angel Gurria, who left the directorship of Mexico's development bank Nafinsa to be international affairs director for the Institutional Revolutionary Party (PRI), predicts Mexico's market will stabilize in tandem with the market for U. S. Treasuries. "The rates went up pretty fast," he says. "I just hope they're as fast in returning to normal." Unfortunately, normal may not be as cheap as Gurria hoped only a few months ago.

By Kelley Holland and William Glasgall in New York, with Geri Smith in Mexico City, Dave Lindorff in Hong Kong, and Bill Hinchberger in São Paulo

SUBMERGING MARKET DEBT



DATA: SALOMON BROTHERS

ILLUSTRATION BY ELLEN WEINSTEIN/GRAPHIC PHOTO DOYLE BW

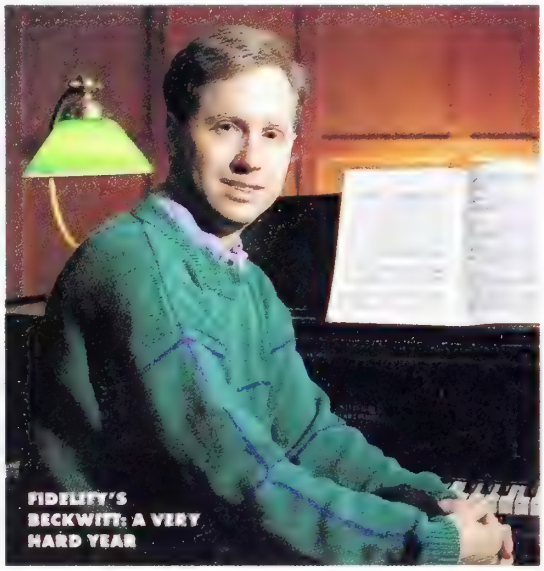
MUTUAL FUNDS

SOMETIMES DIVERSITY IS NO DEFENSE

Even multi-market funds are surprising investors with losses

For the last few years, asset allocation mutual funds worked like a dream. The funds, which divvy up money between stocks, bonds, and cash to find the most reward for the least risk, beat the pants off the Standard & Poor's 500-stock index and the average equity fund. Asset allocation became one of the hottest concepts in mutual funds—and the money poured in.

But for the asset allocators, 1994 is becoming a nightmare. Four large funds that together account for 44% of all the money in AA funds are down an average of 5.8%, about 1.5 percentage points worse than the average diversified equity fund, according to Morningstar Inc. That's hardly a disaster. But the funds have been heavily marketed to first-time investors as one-stop, low-risk investments. "Based on the last few years, an investor could have concluded an asset allocation fund always goes up," says Robert A. Beckwitt, who runs the $10.7 billion Fidelity Asset Manager Fund. Indeed, his fund has not had a down quarter in nearly four years, when the fund had less than $400 million.



FIDELITY'S BECKWITT: A VERY HARD YEAR

EVEN SPREAD. So what's gone wrong? In a nutshell, the markets tripped up the asset allocators. Asset allocation builds on the old idea of diversification in the stock market. But instead of just buying stocks, AA funds may include bonds, foreign securities, or even gold.

Asset allocators don't expect to hit home runs in every market. Indeed, they figure that the markets will move in different directions and at different speeds, so a losing position in one market will be more than offset in one or two others. "Usually, it's the bonds which give you protection when stocks go down," says Richard Rubinstein, who runs the Oppenheimer Asset Allocation Fund.

But so far this year, AA funds have few places to turn. Even with dividends included, the S&P 500 is down 4.4% (through Apr. 18). The 10-year Treasury bond has sunk 9%. That's deadly for such funds as Vanguard A Allocation Fund and the Stagecoach A set Allocation Fund, both of which to large-cap U. S. stocks and investm grade bonds. While foreign secur might have helped in other periods ing offshore in 1994 has just meant ing new places to lose money. Euro bonds have been sinking, too. I American and Southeast Asian st and bonds are also in a swoon.

Ironically, the only foreign ma that rallied this year is Japan, up Fund watchers think a small holdi Japan kept the Merrill Lynch Globa location Fund slightly in the b though Merrill officials refused to di the fund's strategy.

Asset allocation funds are soupe versions of "balanced" funds, first i duced in the 1930s. Balanced funds ically maintain a fairly constant m balance of stocks and bonds, suc 60% stocks, 40% bonds. AA funds u ly offer more asset classes, chang mix more frequently, and employ puter models to plot strategy.

CASH BETS. Fund companies start roll out asset allocation funds afte 1987 stock market crash, since the that were around before the c dodged the debacle. "We started with about 60% in stocks. As stock interest rates went up, we kept s stocks," says Larry Tint of Wells F Nikko Investment Advisors, which the Stagecoach Asset Allocation F Two weeks before the crash, the was down to 10% stocks—which all it to weather the storm and bea market by three percentage point the year.

In retrospect, the optimal asse 1994's first quarter would have cash, yet few allocators' models pointed that way. Tint says at the e 1993, the expected return from s was six percentage points greater cash; from b four. But he notes that thoug numbers sugg stocks and would outper cash in the first ter, it's only a ability, and some the most pro event is not th that occurs. Sti locators have le not to stray their models. "W been doing this 1973, and it's s

ASSET ALLOCATORS COULDN'T DODGE THE BULLETS, EITHER

Fund	Total return*	Assets Billions**	Fund	Total return*	Assets Billions**
FIDELITY ASSET MANAGER	-5.56%	$10.7	USAA INVESTMENT CORNERSTONE	-2.81	0.8
MERRILL LYNCH GLOBAL ALLOCATION B	0.08	5.7	ZWEIG MANAGED ASSETS B	-2.27	0.5
FIDELITY ASSET MANAGER: GROWTH	-5.61	2.7	COMSTOCK PARTNERS STRATEGY O	-3.99	0.5
CAPITAL WORLD GROWTH & INCOME	-2.50	2.2	DREYFUS CAPITAL VALUE A (PREMIER)	-1.35	0.4
SOGEN INTERNATIONAL	1.13	1.8	PRUDENTIAL FLEX. CONSERV. MGD. B	-4.02	0.4
VANGUARD ASSET ALLOCATION	-5.81	1.2	PHOENIX TOTAL RETURN	-3.03	0.4
STAGECOACH ASSET ALLOCATION	-6.10	1.1	PRUDENTIAL FLEX. STRATEGY B	-5.08	0.4
DEAN WITTER STRATEGIST	-2.75	0.8	STANDARD & POOR'S 500	-4.40	

*Appreciation plus reinvested dividends and capital gains, before taxes, Jan. 1-Apr. 18, 1994

**Assets under management as of Mar. 31, 1994

DATA MORNINGSTAR INC.

ll," says William L. Fouse of Mel-
apital Management Corp., who runs
billion in asset allocation programs,
ing the $1.2 billion Vanguard Asset
ation Fund.
elity's Beckwitt says late last year
ured that 1994 would be more dif-
than 1993, when the Asset Manag-
d posted a 15.9% total return. But
at 3%, offered no return above the
on rate. To protect the portfolio,
vitt sold his Asian stocks and scaled back the Latin holdings. He also swapped investment-grade bonds for junk bonds, which would profit from a stronger economy, and European bonds, which would benefit from sluggish growth on the Continent. That wasn't enough. In March, when interest rates continued to climb, he started selling U. S. equities as well.

Now, Fidelity Asset Manager has about 40% in stocks, a "neutral" weighting for the fund; 36% in bonds; and a hefty 24% in cash. About a third of the assets are overseas. He thinks some of the beaten-up emerging-market bonds offer good value, as do U. S. junk bonds.

So far, the investors who embraced asset allocation funds are sticking with them. Once the markets both in the U. S. and overseas start moving on their own fundamentals instead of all operating in lockstep, that tenacity is likely to be rewarded.

By Jeffrey M. Laderman in New York

AKERS

OTECH'S ATTERED BANKER

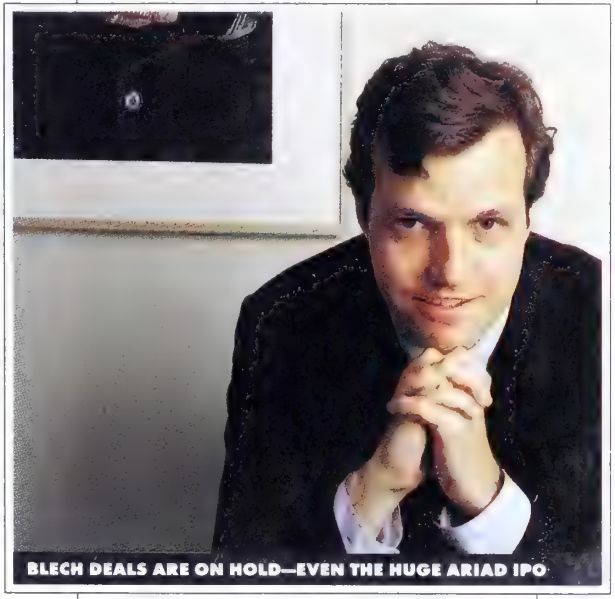
d Blech is thrashed by the shorts amid rumors of a cash crisis

ne crisis at D. Blech & Co., a New York investment boutique, barely asted a week. But the aftershocks till reverberating throughout the h industry.

Blech, which is run by 38-year-old h finance whiz David Blech, ap- to have survived a serious cash n and a powerful assault by short- s. Yet his problems have left in- rs reeling. A three-day pummeling e shorts, which began on 13, pushed down shares in ecent Blech-managed initial offerings an average of 18%. mpanies that hired Blech to capital, further, may be d to scale back their plans. POs that Blech has in regis- n with the Securities & Ex- e Commission will almost nly be delayed, and the of- prices will be cut below originally planned, indus- urces says. Blech declined ent, but a spokesman con- d that all Blech deals are itly on hold. One deal wait- the wings is a monster million IPO for Ariad Phar- iticals Inc., a Cambridge) company that became the t biotech startup in history 2 when Blech raised $46 in a private placement.

XTENDED? All of this is a humili- blow to the nation's most aggres- iotech financier, one of the few in- ent bankers capable of raising l for cash-strapped biotech com- . His sales force now totals about id he has developed a following of ıy individuals who invest in his ighly risky stocks.

At the root of Blech's troubles was the recent stock slump, which inflicted serious damage on biotech issues. To arrest the decline in companies he had taken public, several biotech experts speculate, Blech began buying shares to prop up their prices. Between December and February, for example, he bought more than 1 million shares of Texas Biotechnology Corp.—about a third of the total public offering. Industry sources say Blech wanted to maintain high values for his IPOs to give his sales force ammunition to sell even bigger IPOs. Yet these sources believe that Blech may have overextended himself by using borrowed money to make the purchases.



BLECH DEALS ARE ON HOLD—EVEN THE HUGE ARIAD IPO

The first signs of Blech's problems surfaced on Apr. 12, says Marc J. Ostro, a senior vice-president at Mabon Securities Corp., when Blech called Mabon to liquidate his 24% stake in NeoRx Corp., a tiny Seattle biotech company. Mabon, which was NeoRx' underwriter and had control of its shares, balked because those shares were restricted from being sold publicly by Blech until June.

Ostro quickly found out why Blech wanted to bail out: Citibank had called in a huge loan to Blech. On Apr. 14, Citibank ordered Mabon to sell the shares, which had been pledged as collateral on the loan, Ostro says. Citi did not disclose the loan size to Mabon, but several sources peg it at $40 million. Two days later, Mabon sold 2.8 million shares at the fire-sale price of $3.75 a share. NeoRx' shares had sold as high as $8 only two months earlier. Citibank had no comment.

"SINGLED OUT." Meanwhile, rumors began circulating on Wall Street that Blech was facing a liquidity crisis, says Robert Sablowsky, capital markets head for Gruntal & Co. "That's when the onslaught began," he says. Many biotech stocks were down that day, but according to Sablowsky, short-sellers specifically targeted stocks associated with Blech. Volume in Blech-related shares was 25% to 30% higher than normal, says Sablowsky.

"It's an obvious strategy" to target Blech stocks, says one hedge-fund manager who specializes in biotech stocks. "Blech was singled out." Attacking several Blech issues would make it much more difficult for Blech to fight back by supporting the shares. The battering was brutal. Hemasure, a $7-a-share IPO that closed earlier in the month, finished the week down 19%. And Texas Biotech, which Blech had taken public in December at 6¾, closed at 4, down 41%. Selling pressure finally eased on Apr. 19, when Blech told his sales force that he was once again on solid financial ground, Sablowsky says.

The situation remains fluid, though, and Blech's many investors are keeping their fingers crossed that his finances as as solid as he says they are.

By Geoffrey Smith in Boston

BANKING

THE BIG BANKS GET SET TO BRANCH OUT IN EARNEST

Abolition of interstate barriers will create fresh opportunities

At last, after years of rancorous debate, one of the nation's biggest regulatory blockades appears to be collapsing. The House of Representatives has passed legislation that would allow full interstate banking. A similar bill has been approved by the Senate Banking Committee. The moves reflect in part Congress' desire to avoid a repeat of the early 1990s, when regional banks' locally concentrated real estate portfolios soured.

In many ways, passage of the legislation would be an anticlimax. Big banks from North Carolina to California have used loopholes to set up beachheads in other states. Some groups of states have established compacts that permit mergers within their regions. Yet abolition of interstate barriers will still create opportunities for acquisition-minded banks—and bank stock investors.

HOT ACTION. Wall Street is already busy pushing deals. Rumors have swirled about possible mergers involving such banks as Bank of New York, First Chicago, Providence-based Fleet Financial, and California's Wells Fargo Corp. and First Interstate Bancorp. So far this year, major banks' stock prices have risen 2.6% while the Standard & Poor's 500-stock index declined 4.8%. But the hottest action, once the law is passed, should center on small and mid-sized banks located in states and regions where interstate barriers have been highest—and where large banks should be most eager to buy in.

Take Missouri. It has long had laws allowing only out-of-state banks from adjacent states to buy in. But if that rule changes, experts say, such Missouri banks as Boatmen's Bancshares Inc., Commerce Bancshares Inc., and Mercantile Bancorp. might be vulnerable—and extremely attrac- tive as stock plays. Boatmen's has an especially tempting franchise stretching from Des Moines to El Paso, and its stock is trading at 33—just 157% of its book value—well below the 200% to 250% that many analysts feel signals potential overpricing. Boatmen's and Banc One Corp. "fit together like a jigsaw puzzle," says Harry V. Keefe Jr., president of Keefe Managers, a money-management and advisory firm that invests mainly in bank and thrift securities. Boatmen's says it plans to keep expanding on its own.

Experts point to a few banks south of the Mason-Dixon line as equally allur Soon it will be open season in Virgi when the state bows out of the So east Compact, a deal among nine s that locks out banks from other reg The Virginia legislature has passed allowing full interstate banking this regardless of whether federal legisl is passed. Several portfolio mana and analysts feel Crestar Financial and Signet Banking Corp. have tem franchises and are of a manageable for an acquirer. Signet has a lucr national credit-card operation that h it generate a lush 18.2% return on ty in 1993, compared with 13% Crestar. But Signet's stock is tradi 42%, 242% of its book value, Crestar's is at 45%, or 158% of bo better bargain.

PRICEY TARGETS. Farther south, mo maining banks big enough to have market clout but small enough t acquired no longer come cheap. sonville-based Barnett Banks In $38.3 billion in assets the ing Florida bank, is tradi 170% of book—but it is shi by Florida's being in the pact. Atlanta's fifth-la bank, $5.9 billion Bank Corp., is trading at more twice book value. Says Ed E. Crutchfield Jr., chai and chief executive of Firs ion Corp. in Charlotte, which has acquired more 40 banks since 1985: "Th nobody left to acquire. It's in the South."

Appealing investments in other regions, but mos also trading at high prices timore Bancorp. was selli nearly twice book before i acquired in March by Fir delity Bancorp. Some s New Jersey banks seen tential targets are costlie

Still, a green light for state banking cannot hel boost even some pricey stocks. That's "icing o cake," according to Jo Neff, portfolio manager a lington Management Co. i vern, Pa. Add that to th of nonbank competitors a need to seriously cut cost many bankers will have inhibitions to speed he into deals that warm de ers' and investors' hearts

By Kelley Holland in York and David Greising lanta, with Amy Barr Washington

RIPE FOR TAKEOVER?

Many analysts look more kindly on acquisitions at less than 200% of book value

Bank	Stock price	Price/Book value
BARNETT BANKS	$47.00	167%
BOATMEN'S BANCSHARES	33.00	157
COMMERCE BANCSHARES	31.00	135
CRESTAR FINANCIAL	45.63	158
MERCANTILE BANCORP.	36.00	178

DATA: BRIDGE INFORMATION SYSTEMS INC.

HY DIDN'T KIDDER ATCH ON?

Street is skeptical of the "We wuz robbed" explanation

as it simply an isolated inci- a scheme that the best con- couldn't have ted? Or did it t a broad, sys- breakdown?

it is a key issue Kidder, Pea- & Co.'s senior gers as they in- gate who was d a two-year, million, phony rnment bond g scheme that isclosed on Apr. dder Chief Ex- ve Michael A. enter says he his top lieuten- fixed-income Edward A. Ce- were victims of y sophisticated trader named h Jett, who ran firm's govern- bond desk. Jett been fired, and her employees suspended from jobs. Jett could e reached for comment.

penter insists that Kidder's con- and risk-management systems are s good as the rest of the Street's, though no systems are foolproof: altimeter said we were flying at ght altitude, and the compass said ere flying in the right direction, e banged into the mountain."

D EYEBROWS. Yet many on Wall are skeptical of Carpenter's "We obbed" explanation of what is one largest Wall Street losses ever. ould the scheme have gone on un- ed since 1991? Why didn't 15-year veteran Cerullo, who was Jett's have a better handle on how Jett enerating "profits" of $20 million to illion a month? And most impor- re Carpenter and Cerullo to blame ilding a culture at Kidder that wed to superstar traders?

CARPENTER AND JETT: KIDDER MAY HAVE GIVEN TOO MUCH POWER TO A SUPERTRADER

John F. Welch Jr., the tough-guy chief executive of General Electric, which owns Kidder, supports Carpenter. "I think, based on everything I know, Carpenter learned of the situation, attacked it vigorously, and has never tried in any way not to get it out," says Welch. "Do I wish he had a nose that had smelled it earlier? Sure. But that's hindsight." GE took a $210 million charge for the Kidder losses on $1.07 billion in first-quarter earnings.

Yet Welch implies that the mess could have been avoided. "Clearly this man [Jett] couldn't do it all alone. People either knowingly made errors or didn't see red flags," says Welch. "No question, when Gary Lynch is through with this investigation, there will be findings" that could lead to further action against employees or their supervisors. Welch is referring to the Kidder-commissioned inquiry being conducted by attorney Lynch.

Lynch is likely to have plenty of questions for Cerullo. A fanatical antismoker who is well-liked and respected at Kidder, Cerullo has had other scrapes with problem traders. In 1991, he was fined $5,000 and censured by the National Association of Securities Dealers for failing to supervise a trader who engineered unauthorized bond transactions. Carpenter backs Cerullo. "He's kicking himself. But I am 100% behind him," says Carpenter. Cerullo declined comment.

MASSIVE POSITIONS. Jett's scheme involved arbitrage trades between the value of pieces of Treasury bonds, called strips, and the recombined bonds. Trouble was, says Kidder, Jett was not generating profit from the slightly greater value of the reconstituted bond, as is usually the practice. Instead, using forward contracts in the strips, he could create much larger bogus profits by exploiting flaws in Kidder's accounting system.

That Jett was allowed to carry out this ploy for such a long time, say Wall Street traders and risk managers, reflects major controls lapses. They claim that if Cerullo truly understood the massive positions Jett must have been taking, he would have questioned Jett about how he was generating such profits. Trading Treasury strips is generally a very low margin area of the fixed-income business, say traders.

Carpenter responds that the profits were not out of line with the real trades on the books and that Cerullo and he were unaware of the phony trades because they accumulated gradually over a period of time. Cerullo "did understand his trading strategy," says Carpenter. But "there didn't seem to be anything terribly out of line. We felt we were running a low-risk, high-margin business."

Kidder may have ignored the lesson learned by Salomon Brothers Inc. in the wake of the 1991 Treasury bond bid rigging scandal: Don't give too much power to traders. When asked whether Cerullo knows how Michael W. Vranos, Kidder's star mortgage-backed trader, generates profits, a senior Kidder official says: "Ed doesn't sit him down and say, 'How did you do it this month?'" But you can be sure such conversations with Kidder traders will occur in the future.

By Leah Nathans Spiro, with Philip L. Zweig, in New York and Tim Smart in New Haven

BY GENE G. MARCIAL

IS EDS GETTING GUSSIED UP FOR A SUITOR?

Watch the sparks coming from the red-hot shares of Electronic Data Systems, a General Motors subsidiary acquired from Ross Perot in late 1984. They may be signaling big changes up ahead that could yield a bonanza for shareholders of both GM and EDS. Trading on the Big Board with the symbol GME, the stock blasted to 36 on Apr. 19, up from 26 in early December—in the face of a stock-market funk.

What's driving it up? The betting is that GM intends to sell a minority chunk of EDS, a maker and operator of data-processing and communications systems, to a potential strategic partner. The word is that several telecommunication giants are interested, including AT&T, British Telecom, and Sprint, the long-distance company that, says one New York money manager, is the "latest entry seeking to buy a stake in EDS."

GM owns 185 million shares, or 42%, of the Class E, or GME stock. But it faces huge capital-gains taxes if it simply sells the stock to a third party. The idea is to get the stock into GM's pension fund and then have the fund handle a deal. And some big investors who own sizable blocks of both GM and GME say the carmaker has been "clearing the deck" to do just that. In November, GM announced that it was seeking regulatory approval to transfer and contribute GME shares to its employee pension fund, which now is underfunded.

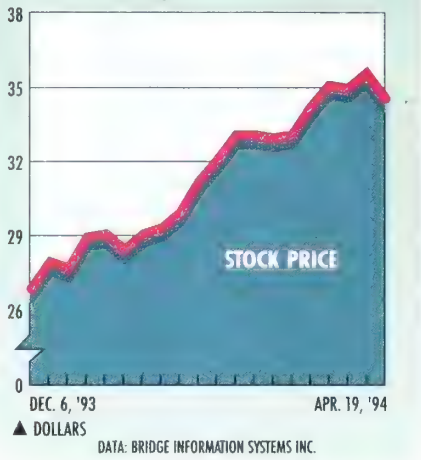
FAT CONTRACT. GM expects to get the green light from the Labor Dept. and the Pension Benefit Guaranty Corp., which would let it temporarily exceed the limits on the amount of employer securities a pension fund may hold. GM is also asking the Internal Revenue Service for relief from paying taxes on the excess contributions to its pension fund.

Once these are approved, the pension fund could sell the stock to a strategic partner. The sale of a big slice could well mean the buyer would award EDS a large contract for its data services.

That would be a big plus for GM as well as GME, since GM will continue to own all the assets of EDS, and it remains a major customer: GM business accounts for 38% of EDS revenues. GME shareholders have only indirect rights in the equity and assets of EDS through an ownership stake in GM. But GME holders participate in EDS profits through dividend payouts.

One large GME investor says that bringing in a new EDS stakeholder could boost the stock to the high 40s because of the beneficial effect on earnings—and possible future deals. Analyst Cathy Baker of Cowen & Co. in Boston is bullish on GME: Her earnings estimate for 1995 is $2.05 a share, up from an estimated $1.74 in 1994. Spokesmen for EDS, AT&T, and Sprint all declined to comment.

EDS MAY BE EXPECTING PHONE-COMPANY CALLS



DATA: BRIDGE INFORMATION SYSTEMS INC.

ACTAVA'S GRASS LOOKS GREENER

The market may be in a downdraft, but expect the languishing Actava Group to perk up, now that entrepreneur John Phillips has won control of the Atlanta-based sporting-goods and lawn-care company. He was named president and CEO in a corporate battle that ended on Apr. 19. The stock jumped to 9, up from 6 just three days before Phillips' election.

Previously called Fuqua Industries, Actava posted a loss last year of $47.5 million, or $2.52 a share, on revenues of $1.2 billion. Phillips, whose group purchased 700,000 shares in the company for $4.4 million, or 6¾ a share, plus an option to buy an additional 300,000 shares, now owns 6% of Actava.

"Our goal is to rejuvenate the company and quickly boost shareholder value," says Phillips. He plans to integrate Actava's sporting-goods, fitness-and-recreation, and camping-equipment businesses into one group and then take it public. Phillips says the underlying assets of the company are worth between $10 to $20 a share—if properly managed. Already, some companies are vying to buy some parts of Actava, such as the Qualex photofinishing unit, which is 49% owned by Eastman Kodak.

Phillips was the president and CEO of Resurgens Communications Group, a long-distance phone company later acquired by John Kluge's Metromedia Communication. With Phillips' background, Actava is expected to acquire a telecommunications company to get back into that industry.

THIS HEALTH STOCK IS FEELING ROBUST

For a chain of clinics located in economically depressed New England, Advantage Health is in the pink. Bucking the slump in the health-care industry, its stock has zoomed 18, up from 10 in December. What's the scoop?

Two things: Advantage Health runs the largest network of comprehensive medical-rehabilitation clinics in New England, "where demand for such facilities has been on the rise," says Jon Kammerer, an analyst at Hartford-based Advest. And the company is a likely takeover target in the still-consolidating rehabilitation market, he says. Advantage owns the 198-bed New England Rehabilitation Hospital, Woburn, Mass.—the nation's third-largest.

So Kammerer thinks Advantage is still undervalued. The stock could hit the mid-20s, he says, given the company's competitive position, exceptional management, and operating record." Kammerer expects earnings of $1.56 a share next year and $1.80 this year, up from 1993's $1.07.

One New York money manager sees the stock hitting 30 to 33 in a buyout deal. "Several of the big HMOs are in rehabilitation companies have been buying Advantage," he says, including Healthsouth Rehabilitation. Advantage Chairman and CEO Ray Dunn confirms that it turned down an offer last year from Healthsouth because he expects Advantage to grow to $300 million in sales in 24 months. "So we deserve a higher price," says Dunn.

ONICS

COPPERTOP EVERY LAPTOP?

acell sparks a drive to standardize high-powered batteries

onald E. Compton, Aetna Life & Casualty Co.'s chief executive, hates the 10 ls of spare batteries he has around with his laptop com- He carries them because if ain batteries won't take a rge, he can't just run to a for replacements. They're a e size, fitting only his Com- ite 4/25C. So his staff has to nem from a computer store l Compaq. It's a pain Comp- an't avoid. His laptop, he is "my one-on-one way of unicating with people."

e same inconvenience afflicts rs of about 150 other models ptop computers, cellular es, power tools, video came- and other portable devices use nonstandard recharge- And not only are the bat- hard to get but they're ex- ve: up to $300, nearly twice rice for standard batteries perform the same functions.

o wins? For one, makers of s and cellular phones, who e fat markups on batteries for captive customers. They sell about illion worth of special batteries a estimates Jane Gilday, an analyst ncock Institutional Equity Services. ther big winners are the battery rs. Japanese companies—led by , Matsushita, and Toshiba—control f worldwide sales of the high-ener- echargeable, nickel-cadmium bat- used in such gear as laptops.

w, though, other producers—par- ly Duracell International Inc.—see ice to cast themselves as cham- of the consumer and pick up busi- boot. The Bethel (Conn.) compa- crusading for the adoption of y standards: preferably, two sizes lular phones and four for comput- ays Michel J. Vernhes, president new-products and technology divi- Duracell Inc., the U. S. subsidi- Let the consumer make the deci- ho to buy batteries from."

acell has had talks with some 50 makers of laptop computers and other gear. That puts it ahead of its U. S. rivals, although Rayovac Corp. in Madison, Wis., recently brought out a standard-size battery for clocks in desktop computers, which replaces 30 different sizes. Eveready Battery, a unit of St. Louis-based Ralston Purina Co., makes some custom batteries. It says it isn't active in the standardization fight because it would rather have device makers take the lead in deciding what they want.

VERNHES: "LET THE CONSUMER MAKE THE DECISION"

Duracell, meanwhile, is starting to win converts. In February, Compaq Computer Corp. began using standard Duracell batteries in its Contura Aero subnotebook computers. "We know it's very difficult for our customers to deal with a number of battery sizes across our line of products," says James W. Hartzog, senior vice-president of Compaq's portable computer division. Fujitsu Ltd. is using Duracell's nickel metal-hydride rechargeable batteries in its PCX pocket flip phone. And Audiovox Corp. is using Duracell standard batteries in its Minivox 500A portable cellular phone.

COMPROMISES? In parallel initiatives, Duracell has worked with AMP Inc. in Harrisburg, Pa., to standardize the connector between the battery pack and the computer. And on Apr. 21, Duracell and Intel Corp. were to announce that they have created a software protocol to let laptops and other devices monitor and manage a new generation of "smart" batteries. Duracell CEO C. Robert Kidder predicts that "most of the computer industry will be converted [to standard batteries] in five years."

Perhaps. Some computer and cellular-phone makers argue that standard batteries would limit their creativity. "To create a standard battery, in many cases, is going to cause a tremendous amount of compromise," says Bret Berg, director of mobile computing products marketing at AST Research Inc., an Irvine (Calif.) computer maker. That argument doesn't hold water with Compaq's Hartzog, who says that not having to worry about battery design could cut 25% of the cost of designing a laptop.

This isn't the first standardization fight in the battery world. In the 1970s, battery makers established standard 9-volt alkaline batteries for smoke detectors. In the 1980s, they did the same with batteries for 35mm, automatic point-and-shoot cameras. In each case, they met resistance from companies that wanted to control the replacement market. Change comes slowly. "You cannot make an elephant dance," says Duracell's Vernhes. But with the high-energy rechargeable battery market headed for an estimated $10 billion in worldwide retail sales by 2002, no wonder Duracell and others are trying this power play.

By Chris Roush in Bethel, Conn.

A BABEL OF BATTERIES

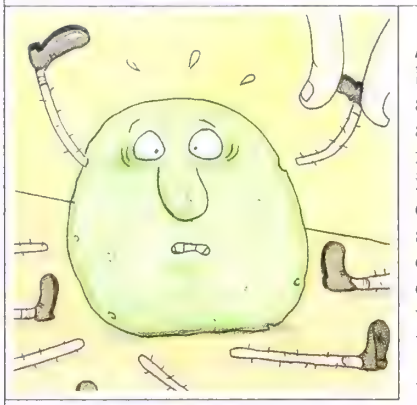
NUMBER OF BATTERY SIZES USED IN EACH CATEGORY OF PRODUCT

DATA: BUSINESS WEEK

Developments to Watch

EDITED BY OTIS PORT

A YUL BRYNNER HAIRCUT CAN K.O. BACTERIA



Antibiotics such as penicillin have long been silver bullets against bacterial infection and disease. But bacteria have steadily evolved increasing resistance to drugs. Some nasty bugs already shrug off all but one antibiotic, and physicians fear that bacteria will soon conquer even this last-ditch defense.

Now, scientists at Washington University's School of Medicine in St. Louis are uncovering a promising new way to battle bacteria—a sort of Yul Brynner treatment. Bacteria use tiny hairlike projections, called pili, to cling to cells in the kidney, lungs, or other organs. Remove these hairs, and the body could simply flush out the invaders. Researchers led by Scott J. Hultgren, an assistant professor of molecular microbiology, may have found the key in special proteins that regulate pili growth. Next, Hultgren hopes to develop a drug that disrupts this process. The work is funded in part by Symbicom, a pharmaceutical company in Umea, Sweden.

ONE MORE HAT IN INTEL'S RING

At last month's CeBIT Computer Show in Germany, regarded as a top showcase for new technology, a tiny company from Milpitas, Calif., walked off with the prize for the most innovative product—which was barely a week old. It's the Nx586 chip, put out by NexGen Microsystems Inc., a new challenger to Intel Corp.'s dominance in microprocessors. NexGen claims Nx586 outperforms comparable Pentium chips at certain chores yet costs up to 25% less. The secret? A proprietary method of converting normal software commands into speedier reduced instruction-set computing (RISC) instructions. Cyrix Corp. in Richardson, Tex., is taking a similar route for its Pentium rival, due for unveiling later this year.

Longer term, Intel may face stiffer competition from the Open Microprocessor Systems Initiative, or OMI. It's a European Union project involving 40 teams of 100-odd companies and universities, with a $270 million budget. Directed by Theo Vaes of Toditec, a consulting firm in Antwerp, OMI is developing a library of microprocessor cores and related circuits to be combined on one chunk of silicon. The goal: a single chip that can run software written for several breeds of RISC chips—and perhaps Intel chips as well, now that NexGen, Cyrix, and IBM have shown that Intel's patents can be gotten around.

HOW SUPERCONDUCTORS CAN TEACH MRIs NEW TRICKS

High-temperature superconducting (HTS) is performing some high-flying feats these days. For example, HTS circuits designed by Superconductor Technologies Inc. in Santa Barbara, Calif., assemble images from the very faint signals being sent back from deep space probes. But STI is now g after more down-to-earth applications: producing better im for the magnetic resonance imaging systems used by hos to peer inside the human body.

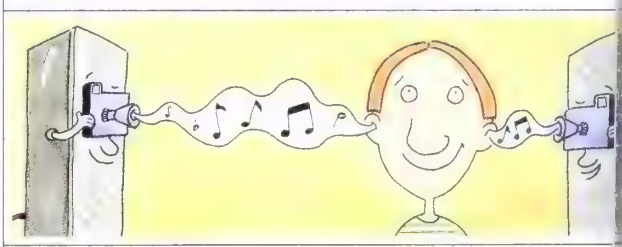
STI's new Supersensor coils act as ultrasensitive antenna the radio signals given off by a patient's body when insi MRI machine. Because the electrical resistance of the s conducting coil is zero, the level of noise contaminating th nal is reduced by 50% or more over copper coils. This re in much sharper images. Also, less powerful magnets c used, trimming the bulk and cost of MRI systems. STI Pres Daniel C. Hu estimates that MRI machine prices could b duced to as little as $200,000, from $1 million and up t And junior-size MRI systems could blaze new paths. The tional Eye Institute, for instance, is helping fund dev ment of the first MRI machine for probing the eye's inte

A BIGGER DOSE OF LITHIUM GIVES BATTERIES A BOOST

Lithium-ion batteries are the hottest new thing in rech ables. They're easier on the environment than nicke mium batteries and have much higher voltages. Lithiun teries do trail slightly in so-called specific capacity, o ampere-hours they produce per kilogram. But resear keep plugging away at that. In the Apr. 22 *Science*, a tea by Kenji Sato of Honda Research & Development C Saitama, Japan, reports lifting the specific capacity to a r 680 ampere-hours per kilogram, a 15% gain.

The researchers did it by stuffing an electrode with lithium "fuel." Instead of making the negative electrode dense graphite, they produced a spongier type of carb heating the chemical polyphenylene. Working with scientis Shinshu University, the Honda team found holes big en not only for lithium ions but also for loosely bonded lit molecules, which are twice as big.

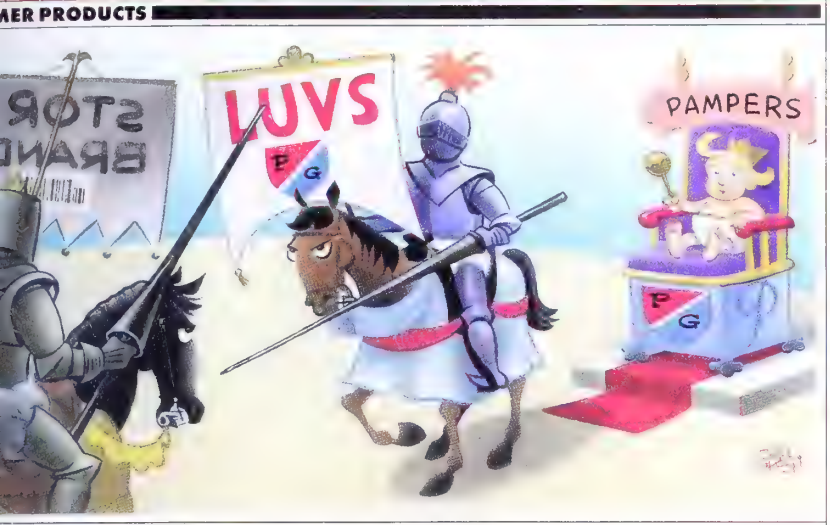
CANON'S SPEAKERS WILL SPREAD THE SOUND WITH MIRRORS



Japan commands the market for stereo equipment—e in speaker systems. Oddly, Japanese companies hav er won brand recognition in quality speakers. Cano wants to change that. And it figures it has a secret we the optical knowhow in Canon cameras.

Last month, Canon took the plunge into the U. S. s market, unwrapping two products in the $300-to-$450 Their claim to fame is in greatly expanding the area which listeners hear well-balanced sound. This is don acoustic mirrors developed in Britain by Hirokazu H. N Canon's European research chief. Bowl-shaped refl have been tried countless times, but such simple refl produce "wishy-washy" sound, says Negishi, because the scatter sounds. His solution: use optical principles to the reflector so that it focuses sound as a camera len dles light.

MER PRODUCTS



TACK OF THE GHTING BRANDS

diapers to beer, major labels are jousting with store brands

High Life—the champagne of bot-ers."
iller Time."

ears gone by, such Madison Ave-e-spun slogans got beer drinkers pony up premium prices for Miller ife. Despite the havoc that micro import beers, discount beers, and ave wreaked on High Life of late, Brewing Co. has found there's me sparkle in the brand. Just not remium-priced brew.

er is one of a clutch of marketers to breathe new life into tired old . They're slashing the prices of well-known products and reposi- them as higher-grade alterna- the store brands and other low-fare that appeal to budget-minded rs. Procter & Gamble Co. prices on a fistful of old rs by 12% to 33% over the months, shifting them to terms a "mid tier" in pric-nong them: Joy dishwash-ergent, Era liquid laundry ent, Luvs disposable dia-nd Camay beauty soap. In a twist on the formula, n Kodak Co. is fighting rands with a new low-seasonal film, Funtime. "fighting brands" have of-n deployed by marketers porary measures to keep customers during recessions. But marketers see this current wave as more than a temporary phenomenon. They view it as a response to the fragmentation of the mass marketplace by taste and, increasingly, economic insecurity. Marketers say many consumers have become switchers, trading back and forth between branded products and store brands. The trend has spurred the growth of private-label products, which have risen from 18.2% of supermarket unit sales in 1989 to 19.7% last year, according to Information Resources Inc.

BREWING SALES. For manufacturers, the midtier brands offer several benefits. They can help a marketer corral switchers without setting off price wars on premium brands. They keep factories humming. And they save old brands from the scrap heap, letting companies milk the equity of years of ads. Miller has brought back the "Miller Time" line in ads to tap nostalgia for High Life.

Until recently, such price-tiering has been confined to a few categories. P&G has employed tiering in shampoos in the U. S., in diapers in Venezuela and Germany, and in laundry detergents in the developing world. Now, fighting brands are spreading and scoring victories. Despite a flat beer market, High Life's sales jumped 9%, to 4.9 million barrels, last year after Miller cut its price 20% or more in most markets. A 12-pack of High Life that cost $6.99 two years ago in Ohio can now be had for $4.99. "The impact was fairly immediate," says Jeffrey P. Schouten, director of pricing for the Philip Morris Cos. unit. Luvs' market share in unit volume is up from 11% to 12.9% since its price was cut by 16% last May, arresting a severe slide.

HIGH-LOW. The challenge is to calibrate a fighting brand to make it good enough to draw consumers from low-priced rivals but not so good it clobbers the marketer's top brands or its profit margins. To offset the lower margins on its Funtime film, for example, Kodak is also launching a high-end film for special occasions, Kodak Royal Gold. On Luvs, P&G eliminated jumbo packages, streamlined package design, simplified printing on the diapers, and trimmed down promotions.

Even so, industry sources say Luvs initially cannibalized Pampers' sales; Pampers recovered when it introduced a new, thinner diaper in the fall. P&G's total unit share rose to 40% in December but slipped back to 39.6% in February. That's up from last April's 39.2% but not by much.

Other marketers figure that if they can't beat store brands, they might as well make them. That's what RJR Nabisco Inc. may do: It recently disclosed plans to test-market private-label cookies and crackers in some stores. Such moves underscore the power of retailers, who love the fat margins on store brands. Retailers are said to make 8% to 12% on store-brand diapers. As part of the Luvs repositioning, P&G has said, it has fattened retailers' margins to 8.6% from 3.3%. Still, some retailers, such as most divisions of Safeway Inc., no longer stock Luvs. In the end, fighting brands won't be contenders if retailers don't give them the chance to duke it out.

By Jonathan Berry in New York and Zachary Schiller in Cleveland, with Richard A. Melcher in Chicago and Mark Maremont in Boston

TO THE RESCUE

Manufacturers are using different strategies to protect their market shares.

PROCTER & GAMBLE dropped prices on some products to put pressure on store brands and rivals while protecting its higher-priced brands.

MILLER BREWING dropped prices on Miller High Life and revived the old "Miller Time" ads to go after store and discount brands.

KODAK will launch Funtime, a new low-price film aimed at store brands. It will be offered only in the spring and fall.

ENTREPRENEURS

NORMAN PEARLSTINE, MEDIA MOGUL IN WAITING

His Friday Holdings has deep-pocketed partners—but few deals

Norman Pearlstine knows a thing or two about business journalism. As managing editor of *The Wall Street Journal*, he directed the newspaper's coverage of the triumphs and travesties of 1980s capitalism. That may explain why Pearlstine seems anxious during an interview about his own entrepreneurial venture, Friday Holdings LP, a year-old media investment company. "Either this will make me look like I haven't done enough," he says, "or it will look like I'm promoting myself."

Of the latter, he is clearly innocent. Pearlstine has kept a stubbornly low profile since he formed Friday Holdings in April, 1993, despite having three highly visible partners: Barry Diller's QVC Network Inc., Fort Worth investor Richard E. Rainwater, and Paramount Communications Inc. How much Pearlstine has accomplished, though, is a matter of some debate. Despite looking at two dozen media properties and more than 300 proposals, he has made only one deal: acquiring a market-research firm for about $10 million.

"BAD LUCK." Media watchers aren't blaming Pearlstine for the slow pace. They say he has been frustrated by the very partners that won him so much publicity when he first announced the venture. "He has had pretty bad luck," says one investment banker familiar with Pearlstine. "Two of his partners ended up at war with each other." The two, of course, are Diller and Paramount—predator and intended prey in the five-month takeover battle eventually won by Viacom Inc.

Pearlstine insists his partners have been fully supportive. Indeed, he says Diller and former Paramount Chairman Martin S. Davis signed off on his deal to buy market researcher BIS Strategic Decisions the same week that a Delaware court broke up Paramount's merger plan with Viacom, midway through the takeover battle. Still, he acknowledges, it's tough getting time with people who are so busy.

That may not change, even now that the battle is over. For one thing, Paramount's new owner, Viacom, still has a passel of worries, not the least of which is its troubled merger deal with Blockbuster Entertainment Corp. Indeed, Viacom Chairman Sumner M. Redstone hasn't been able to meet Pearlstine yet. What's more, Viacom's heavy debt load will constrain its ability to dole out funds: [illegible] is one of the more modest investments we will make," says Thomas E. Dooley, executive vice-president of Viacom.

Unlike some venture capitalists, Pearlstine doesn't have a pot of cash to put into. His seed capital consists of $1 million dollars to pay for office space and salaries. As general partner of Friday Holdings, he must bring projects to the limited partners, who then decide whether to back them.

SELLING THE STORY. Pearlstine says he would rather walk than run any deal. "People make a lot of mistakes by being compelled to move quickly." After leaving the *Journal* in 1992, he took several months to scour the media landscape for his niche. Pearlstine was drawn to the nascent business of electronic media. With Friday Holdings—which is named for his wife, author Nancy Friday—Pearlstine plans to create an array of print and electronic products that explain the revolution in communications to a broad audience.

Buying BIS from Nynex Corp. was the first step. The company sells information about technology to clients in eight countries. But Pearlstine has bigger plans for it. He wants to expand its $25 million in revenues by delivering its news electronically. Also, he may use it as an information resource for today's other business trade publications. In October, he hired respected journalist Denise Caruso to start a newsletter focusing on technology.

Friday Holdings has ventured into less esoteric publishing properties, but it has come up short on [illegible]. Pearlstine studied Communications, a trade publishing company that owns *Billboard*, *Adweek*, and *The Hollywood Reporter*. But Dutch publishing ended up buying it for $220 million. Pearlstine considered investing in a hot new magazine about the

THE PEARLSTINE FILE

AGE 51 **BORN** Philadelphia

EDUCATION

- A.B., Haverford College
- L.L.B., University of Pennsylvania
- Postgraduate work in securities law at Southern Methodist University

PROFESSIONAL

- Correspondent and editor, Wall Street Journal, 1968–78
- Executive Editor, Forbes, 1978–80
- Managing Editor, Wall Street Journal, 1983–91
- CEO, Friday Holdings, 1993-

PERSONAL Married to author Nancy Friday

The publishers were seeking $3.5
n for a 15% stake, though, and Fri-
Holdings ceded the field to media
S. I. Newhouse Jr.
w, Pearlstine says he is focusing
rting—rather than acquiring—mag-
. One possibility is a publication
would compete with *Wired*, but
have more of a business feel.
tine has hired Peter W. Eldredge,
r publisher of *Newsweek*, to sound
adison Avenue. If he did launch
magazine, Pearlstine would prob-
lo so in a joint venture with an-
publishing company.
rlstine has a prodigious track
l in starting publications. He
l launch the *Wall Street Journal*'s
and European editions, and he
w the birth of *SmartMoney*, a per-
finance magazine backed by Dow
& Co. and Hearst Corp. But with
eeled players such as Newhouse
ng his niche, Friday Holdings faces
lable competition.

STANCE. S. Christopher Meigher
former Time Inc. executive, has
l an estimated $60 million to
ll his new media company, for ex-
. But Meigher Communications is
g only established magazines,
it hopes to expand into electronic
ns. "We're basing our company on
lationship between magazines and
ng readers," he says. Starting from
h, without any readership, says
er, is a riskier proposition.
l, Pearlstine shouldn't be under-
ated. He gets regular counsel from
and Rainwater. The QVC chairman
ed him to hire Caruso, who had
editor of the newsletter *Digital*
, which focuses on multimedia.
both partners say they are uncon-
l by Pearlstine's methodical pace:
new world for him," says Diller.
as put together some very good
early on." Pearlstine has other
ful friends, too, including his old
ld colleague, Dow Jones Chairman
R. Kann, and producer James L.
s. Kann says Pearlstine approached
ones about a joint venture if Fri-
oldings succeeded in acquiring BPI.
ones passed on that proposal, but
says he is open to others.
rlstine promises a string of an-
ments this year. Caruso's newslet-
rts appearing next month. And he
riday Holdings is involved in three
other deals. Pearlstine has even
turning up at conferences as a
nent of the Information Super-
ay. "For all the hype," he says
the media industry, "something
tic is happening." Now, if Pearl-
ould only generate some drama of
n.

By Mark Landler in New York

SUE HERERA. JANICE LIEBERMAN. WATCHING OUT FOR YOUR MONEY ON *MONEY TONIGHT.*

Want to make more money? Tune in to CNBC's hottest new show, ***Money Tonight*** *and watch your money grow. Hosted by Sue Herera, an expert on personal finance issues, and Janice Lieberman, the award-winning investigative journalist specializing in exposing consumer ripoffs,* ***Money Tonight*** *is the premier show on television about managing your money. And with editors and reporters from* **Business Week** *magazine bringing their expertise to* ***Money Tonight*** *every Thursday, you're guaranteed to profit from tuning in.*

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Commentary/by Christina Del Valle

WHO SHOULD CONTROL AIR TRAFFIC CONTROL?

When Vice-President Al Gore talks about the need to reinvent government, nearly everyone cheers. But the political stone wall blocking one of his centerpiece proposals—privatization of the air-traffic-control system—provides a lesson in just how hard it is to turn good intentions into Washington reality.

The Clinton Administration wants to set up a government corporation, like Amtrak, to control traffic on the nation's airways, leaving responsibility for air safety to the Federal Aviation Administration. The new corporation would be financed by fees from airlines and private-plane operators. That would take $7 billion of FAA spending off the federal budget and cut government employment by 38,000. Supporters also hope that semiprivate status would end the procurement and management snafus that have caused monumental cost overruns in the construction of the FAA's Advanced Automation System.

SELLING CHANGE. Administration officials, led by Transportation Secretary Federico F. Peña, have been crisscrossing the country, hawking the idea—with much success. The scheme was endorsed by the industry-labor commission appointed by President Clinton in 1993 to recommend changes to boost U. S. airlines. Air-traffic controllers, weary of miserable labor relations under the FAA, support a change. "We want a say in how our company is run," says Barry Krasner, head of the National Air Traffic Controllers Assn., which represents 10,000 workers. Under privatization, "we'd be able to bargain wages instead of just working conditions."

Some opposition comes from general aviation interests, which fear that the airlines' influence over a privatized system would drive up their costs—and perhaps freeze corporate and private planes out of popular airports. "If they start charging pilots for everything, they're going to kill the industry," grumbles Joseph M. Danoff of Gallup, N. M., owner of a four-seat Cessna.

But the real culprit delaying privatization is Congress, which won't surrender control over the operation. ATC reform may represent a way to overcome the bureaucratic impediments that have prevented the FAA from using cutting-edge technology to improve economic efficiency—a central theme of the reinventing-government effort. Key legislators, however, won't even contemplate it. Senate Commerce, Science & Transportation Committee Chairman Ernest F. Hollings (D-S. C.), aviation subcommittee Chairman Wendell H. Ford (D-Ky.), and House Public Works & Transportation Committee Chairman Norman Y. Mineta (D-Calif.) have all but ruled out action on the proposal, which has yet to find a sponsor.

Privatizing tower operations would boost efficiency—but Congress won't hear of it

"They want to make this a showcase example of reinventing government," sniffs one House staffer. "But it creates problems in and of itself." A major difficulty, from Capitol Hill's viewpoint, is that a self-financing corporation would not be subject to lawmakers' jealously guarded control of its annual budget.

Congress admits there are serious problems with ATC. House aviation committee Chairman James L. O[illegible]star (D-Minn.) is threatening to [illegible]cel the Advanced Automation Syste[illegible] contract with a Loral Corp. unit [illegible]merly IBM Federal Systems Co.) [illegible]start over. The cost, projected in [illegible]at $2 billion, has zoomed to $7 bil[illegible]. The first installation, planned for [illegible] is at least six years away. Meanw[illegible] the FAA is using technology tha[illegible] some cases, dates to the 1940s to [illegible] with 7 million commercial flights [illegible]rying more than 475 million pas[illegible]gers a year. Revolv[illegible]door management—[illegible] FAA administrators in[illegible] last 10 years—and pore[illegible]ous procurement r[illegible] keep the agency be[illegible] the times.

MIXED RECORD. Tur[illegible] the job over to a corp[illegible]tion won't cure all tha[illegible] the system. The reco[illegible] such enterprises is m[illegible] with such relative suc[illegible]es as the Tennessee [illegible]ley Authority offse[illegible] such dismal failures a[illegible] U. S. Postal Service. [illegible]structural shakeup s[illegible] almost sure to improv[illegible] the FAA's record. F[illegible] that the airlines w[illegible] push a semiprivate [illegible] corporation to cut co[illegible] should be allayed by [illegible] fact that the govern[illegible] would still regulate [illegible] issues as the spacing of takeoffs [illegible] landings. Meanwhile, freeing the c[illegible] system of the dead hand of federa[illegible] sonnel and procurement rules [illegible] yield gains in efficiency.

Congress should be pushed t[illegible] privatization. The White House [illegible] crowded legislative agenda, and [illegible] politically hot issues as health-ca[illegible] form and crime take priority. I[illegible] Bill Clinton really believes in rein[illegible]ing government, he should spend [illegible] moments working for an initi[illegible] whose only serious opposition c[illegible] from the vested interests on the[illegible]

Christina Del Valle covers [illegible] portation in Washington.

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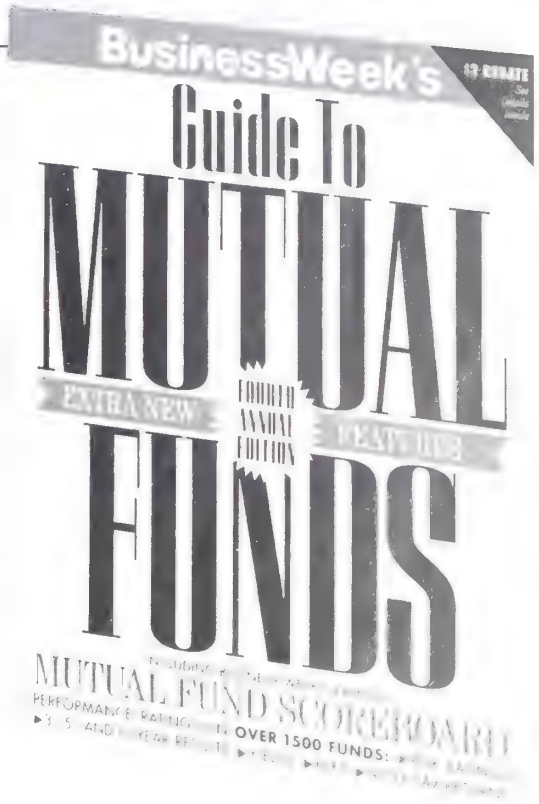

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BUSINESS McGRAW-HILL

EDITED BY AMY DUNKIN

Estate Planning

YOUR KIDS, YOUR WILL—AND YOUR SECOND SPOUSE

You never know how truly complicated life can be until you marry, have children, divorce, and remarry—and accumulate enough wealth to start worrying about where all the money will go that you can't take with you. That's when you suddenly develop an interest in estate planning.

Like it or not, after your death your spouse may not feel the same compulsion to provide for your kids that he or she did when you were alive. The goal of estate planners is to find a way to take care of the spouse and leave an appropriate amount to the children of the previous marriage—while paying as little in taxes as possible.

How to do this becomes more intricate the larger the estate, the bigger the age gap between husband and wife, and the more children from different marriages there are to consider. "People in these situations come to the table with a lot of emotional baggage," says Joel Isaacson, a New York financial planner. "You have to raise issues and discuss problems no matter how difficult it may be."

SPREAD AROUND. Consider this scenario: Your second husband—who had no children of his own—loves your five kids from your first marriage and intends to make them the chief beneficiaries in his will. But by the time he dies, 20 years after you do, only $50,000 of the $2 million you left to him remains to spread around. Or picture this: Not long after your death, your second wife remarries. Instead of leaving what she inherited from you to your children, as she promised, she decides her second husband and the children they've had together deserve it more.

Luckily, estate planners have devised strategies that can ward off such disasters. A few techniques are specifically meant for what they term "second-marriage situations." Others are simply tools they always have in their bag but that can be applied to help balance out the competing interests in your estate. These plans, and the attorneys who draft them, don't come cheap. The documents alone can run $3,000 to $6,000, while planning [illegible] es can cost $5,000 to $ [illegible] depending on the siz[illegible] complexity of your este[illegible]

Unless you have an [illegible] of more than $1.2 millio[illegible] amount you can easily [illegible] from inheritance taxes [illegible] need not worry about [illegible] ic planning tools. Bute[illegible] people with a few hu[illegible] thousand dollars may w[illegible] use trusts to provide [illegible] for their spouse and pr[illegible] the principal for their c[illegible] after the spouse dies.

The easiest way to [illegible] is through a "credit [illegible] trust," which is also kn[illegible] a "bypass" or an "A" [illegible] The maximum you c[illegible] into this kind of tr[illegible] $600,000—the amount y[illegible] leave to anyone exem[illegible]

ance taxes. These are exible instruments, but ly, someone with a state in a second mar- would structure the provide an income for se, then have the prin- o to the kids after the ng spouse's death.

could also choose to alf the income paid to ildren and half to your or have all the income our children. However, r children are old , and you don't in- to include your in the credit-shel- st, you could leave kids the $600,000 t and forego the of trust arrange- Another option is e an independent discretion over ing the income, by ng "sprinkling" nown as "spray") s. That way, if pouse needed the more than your n did, he or she have access to it.

estates of several , the $600,000 you ce in a credit-shel- st is probably too sum for your chil- receive their fair says Dawson Tay- partner at Cairn- & Hempelmann, a law firm. That's Qualified Termin- nterest Property or QTIPs, come in.

NTROL. Far less than a credit-shel- st, a QTIP can be as you want, but be structured so ur spouse receives interest for life s no control over ets the money after But because the sur- spouse gets all the in- no tax is due on the til after he or she dies proceeds pass to your . A division of a $2 estate could include the children $600,000 dit-shelter trust, leav- spouse $400,000 out- nd putting $1 million P, says Isaacson.

QTIPs prove the most inadequate when the surviving spouse is close in age to the children from the first marriage. Consider this hypothetical estate: A 65-year-old man has $10 million to distribute among his 45-year-old wife and three children in their 20s and 30s from a previous marriage. To avoid estate taxes, he could leave $9.4 million in a QTIP and give his children $600,000 outright. "In all likelihood, the children won't get any money from the QTIP until they're in their 60s, so he is effectively disinheriting them in favor of his grandchildren," says Joseph Toce Jr., head of family-wealth planning at Arthur Andersen.

If he wanted to split the estate half and half, he could instead leave $5 million in the QTIP and hand $600,000 tax-free plus a taxable $4.4 million to his children. The problem is that about $2 million of the estate would go to pay inheritance taxes at his death. Federal estate taxes start at 37% for estates valued at $600,000 to $750,000 and reach 55% for estates larger than $3 million. Not surprisingly, estate planners have ways to minimize the tax bite.

The best option is to make use of gift-tax exclusions. If your spouse will participate, you can distribute $1.2 million among your children tax free during your lifetime (but you will no longer be entitled to the $600,000 exclusion at your death). Then, annually, you can also give each child an additional $20,000 (or $10,000 if your spouse doesn't join in) exempt from taxes.

If you can't provide your children with the portion of your estate they deserve tax-free through gifting, you can use life insurance. Properly structured, an irrevocable life-insurance trust is not subject to estate or income tax. These trusts are often used to provide heirs with cash to cover estate taxes on a business or expensive home they have inherited. But life-insurance trusts can also be useful in second-marriage situations to provide an inheritance directly to your children.

Here's how it works: You irrevocably transfer your insurance policies into a trust so they are not considered part of your taxable estate. The trust is named the beneficiary, and it pays out the proceeds after your death. These trusts can also grant a trustee sprinkling powers. The premiums are paid by gifts you make to the trust.

A charitable lead trust can be another useful tool. The trust pays an annuity to a charity for several years and then the principal reverts to your children, who get a discount on the estate taxes based on how much the charity received. That way, your kids know when they will get their inheritance.

Much of the anxiety that second marriages arouse can be alleviated through a prenuptial agreement, says Stuart Kessler, senior tax partner at Goldstein Golub Kessler & Co. He says he has lost clients who were offended when he suggested a prenup, but he believes they are necessary when there are children from a previous marriage. For one thing, if the amount you intend to give your kids will prevent you from leaving your spouse the percentage of your estate required by state law, a prenup signals that your new spouse will waive his or her rights. And it should put your children's fears to rest—which may make for a friendlier, more trusting family relationship while everyone is still alive. *Amey Stone*

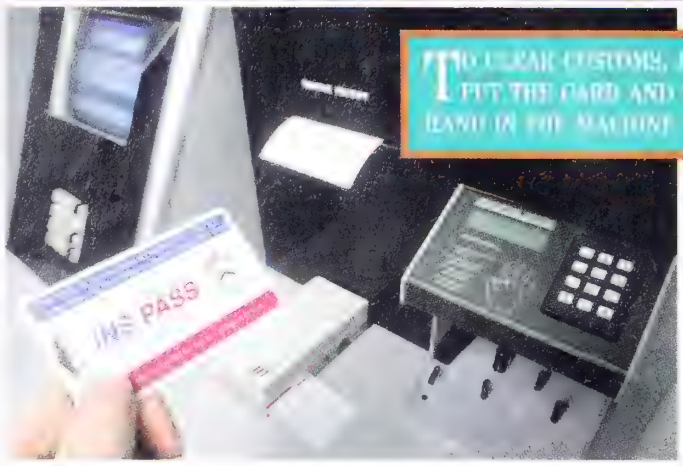
ESTATE PLANNING TOOLS FOR MODERN FAMILIES

PRENUPTIAL AGREEMENT	Helps resolve any family tension about how a second marriage will affect your children's inheritance. Some states set a minimum on the percentage of an estate a spouse must inherit. The prenup can often get around it.
CREDIT SHELTER TRUST (also called A Trust or Bypass Trust)	A trust formed with the $600,000 that is exempt from estate tax. In a second marriage situation, the trust provides income to the surviving spouse for life, but after his or her death, the principal goes to the children.
QTIP TRUST	Similiar to the above credit shelter trust, but for those with estates larger than $600,000. Proceeds are taxed after the second spouse's death.
GIFTING PROGRAM	By dividing the $600,000 ($1.2 million if your spouse participates) exemption among your children, plus giving them each $10,000 a year ($20,000 with your spouse), you may be able to provide your children with much of their inheritance tax-free, before you die.
IRREVOCABLE LIFE INSURANCE TRUST	Properly structured, these trusts are free from estate and income taxes. Transfer your policy to the trust and gift the premiums. The trust receives the death benefit, which is disbursed immediately or managed for your heirs.
TRUST WITH "SPRINKLING" OR "SPRAY" POWERS	Grants a trustee discretion over the distribution income from a trust. Income can go to the surviving spouse or your children, according to their needs.
CHARITABLE LEAD TRUST	The trust pays income to a charity for a set number of years before your children inherit the principal. They then get a discount on estate taxes based on the amount the charity received. Another plus: Your children know what year they'll receive their inheritance.

DATA: BUSINESS WEEK

Travel

A BETTER PASSPORT: THE HUMAN HAND



Fed up with waiting in long passport lines when you get back from an overseas flight? If you're one of the nearly 10 million passengers who returned home last year through John F. Kennedy or Newark International Airports, the U.S. Immigration & Naturalization Service is offering a way to zip you through. You won't even have to show your passport.

The INS Passenger Accelerated Service System (INS PASS) allows you to use an electronic hand reader to verify that you are who you say you are. The key to the quick ID review is the human hand. Like fingerprints, every hand pattern is unique. The INS digitally captures the design of a participant's hand and embeds it on a wallet-size white plastic card, which the traveler carries. Readers located in INS PASS kiosks at arrival terminals then can identify the person by matching the print on the card against his or her hand placed palm-down on the machine.

SIGN UP. The program is open to all U.S. citizens and most Canadians, Japanese, and Western Europeans. Although now limited to two U.S. airports in the New York area, they are important ones. One passenger in five returning to the U.S. lands in the New York area, where they must clear immigration before heading to their final destination. What's more, the INS hopes to expand the system to other U.S. cities. Toronto's airport has just started clearing INS PASS cardholders through U.S. immigration if they are traveling to the U.S. The airport in Frankfurt, Germany is also studying the system.

You can obtain an INS PASS application from the six INS PASS Enroll Ce... at JFK or the ... International T... nal B at Newa... call the INS di... for an I-833 ... (212 206-650... JFK; 201 645-4400 for ... ark). Participating airl... American, Delta, Britis... ways, United, and TWA ... have them.

To qualify for INS P... person should make at ... three flights a year ... overseas into JFK or Ne... So far, only 20,000 pe... have signed up. Ther... reason not to. All you ... to do is show customs o... the receipt (or I-94 dep... document for foreigners ... INS PASS machines issu... you'll be in your taxi ... fellow passengers wait i...

After the first anniv... of the $1.5 million pro... late May, the INS will i... cost-effectiveness study ... goal is to put coded han... data on machine-re... passports. Then all you'l... to worry about will l... luggage. *Patrick*

Smart Money

DIALING INTO THE TELECOMS OF TOMORROW

In this unsteady market, investors in technology stocks may feel like they're doing a high-wire act. But this may in fact be a good time to go wireless. Companies specializing in cellular-phone systems, pagers, and other wireless technologies are battered down, but as they make new inroads with consumers, they promise healthy returns in the near future.

Wireless stocks have gotten hit by the same double whammy as other technology stocks: rising interest rates and a dropping Dow. But the sector's fundamentals are still powerful. Companies report that subscriptions are up 50% this year, with robust earnings and cash-flow growth ahead. Market penetration for cellular phones alone is only 7% in the U.S., leaving ample room for expansion.

For the risk-averse, a "safe" way to enter this sector is by investing in Southwestern Bell or BellSouth. Together, they control 23% of the cellular-phone business, yet this represents only 9% of their revenues. Unlike many wireless startups, they have solid earnings and cash flow, says Morgan Stanley analyst Stephanie Comfort.

Many analysts are eager to catch Motorola while it's down. It got clobbered when its first-quarter earnings were 1¢ less than expected, but it still has an excellent position in the wireless world. Its stock, which split on Apr. 18, is 18% off its 52-week high. Many analysts recommend AirTouch, recently spun out of Pacific Telesis, California's Baby Bell. It has excellent domestic and global exposure, including licenses to operate cellular systems in Germany, Italy, Japan, and South Korea. It's also trading at 11 to 12 times cash flow compared with 18-20 ... for most cellular compa...

HEAVY BACKERS. Another ... ular pick is Nextel, whic... a digital technology bas... frequencies used by disp... ers. It should be more ... cient, clearer, and ch... than cellular. Nextel ... some heavy backers i... ing MCI and Motorola. ... are betting the vast g... potential of the cellular ... ket will leave room f... other major player—... though it hasn't set u... systems yet.

Although less ex... than cellular, paging is ... ing 20%-50% annually. ... a month, the devices ... become popular with fa... Prudential analyst ... Bauer likes Paging Net... because it's developing ... beepers that allow call... leave short voice mes... It will function like a p... sized answering machi... costs a lot less than a c... phone. *Pam*

WIRELESS TECHNOLOGY: POSSIBLE PLAYS

Stock	Price Apr. 18, 1994	52-week trading range
AIRTOUCH	$23	$19⅝-27⅛
MOTOROLA	45¼	31½-55⅛
NEXTEL	33¾	22⅛-54⅛
PAGING NETWORK	22½	18⅞-34½
SOUTHWESTERN BELL	42½	31¾-47

DATA: BRIDGE INFORMATION SYSTEMS INC

apability: executive programs

EUROPE'S GREAT EXPECTATIONS

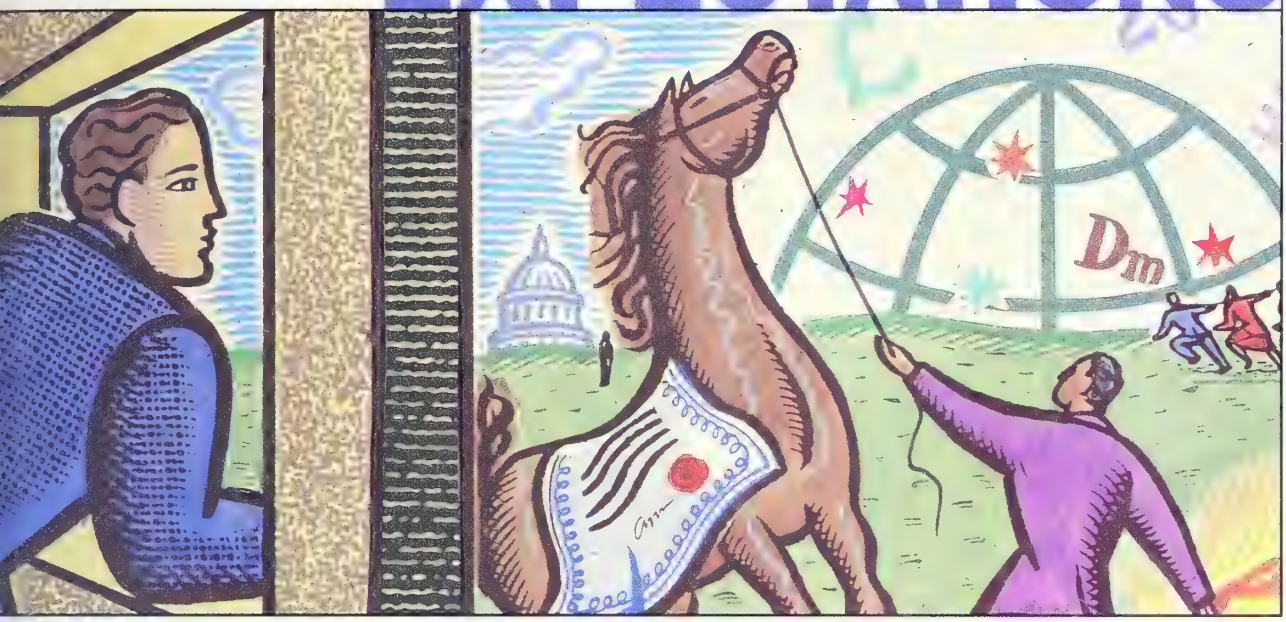


Illustration by Tim Grajek As seen in BusinessWeek, June 21, 1993 Issue

The 1994 Business Week Europe Roundtable of Chief Executives

Great Expectations: The Future of European Business

Date: November 3-4, 1994
Place: The Regent Hotel, London

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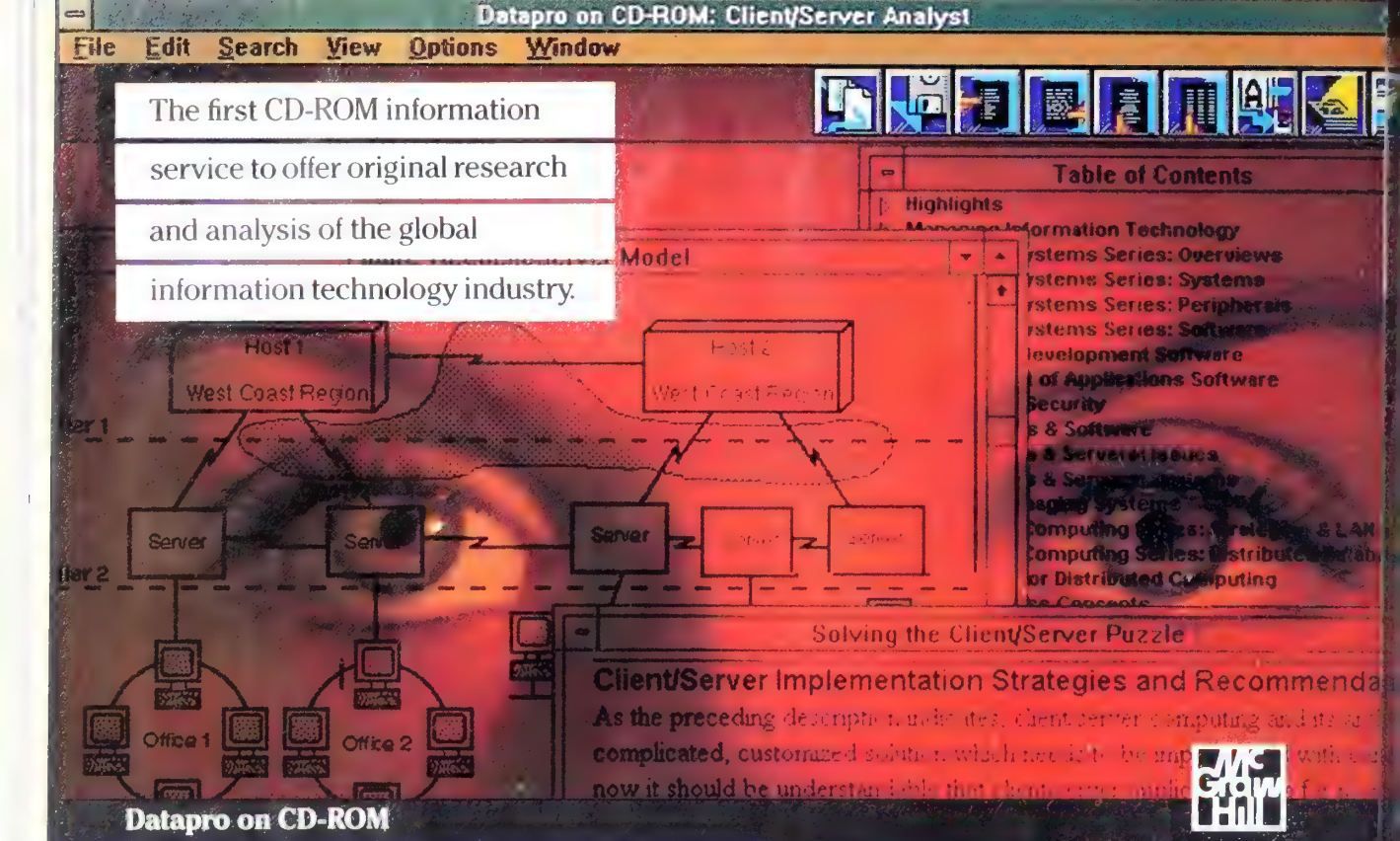

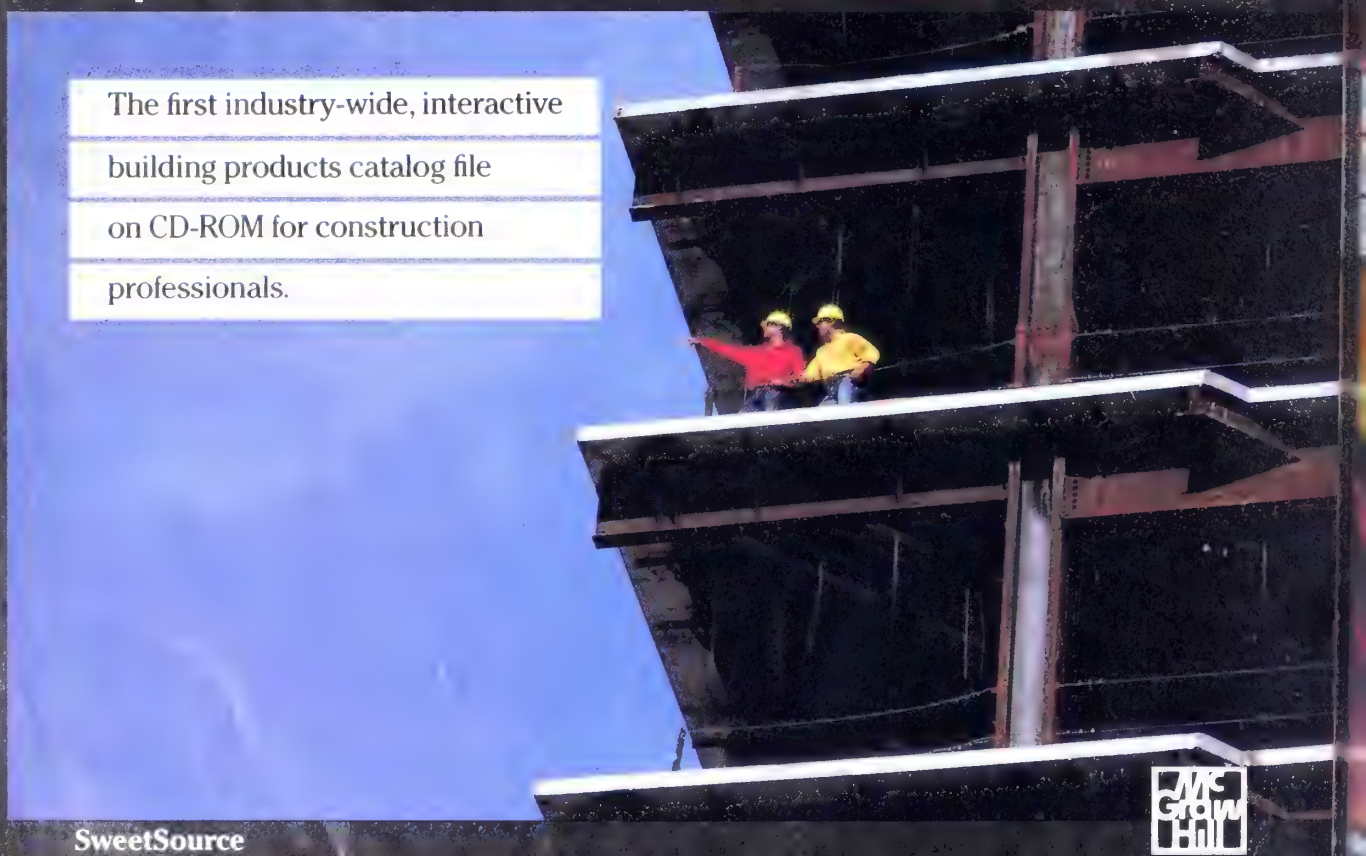

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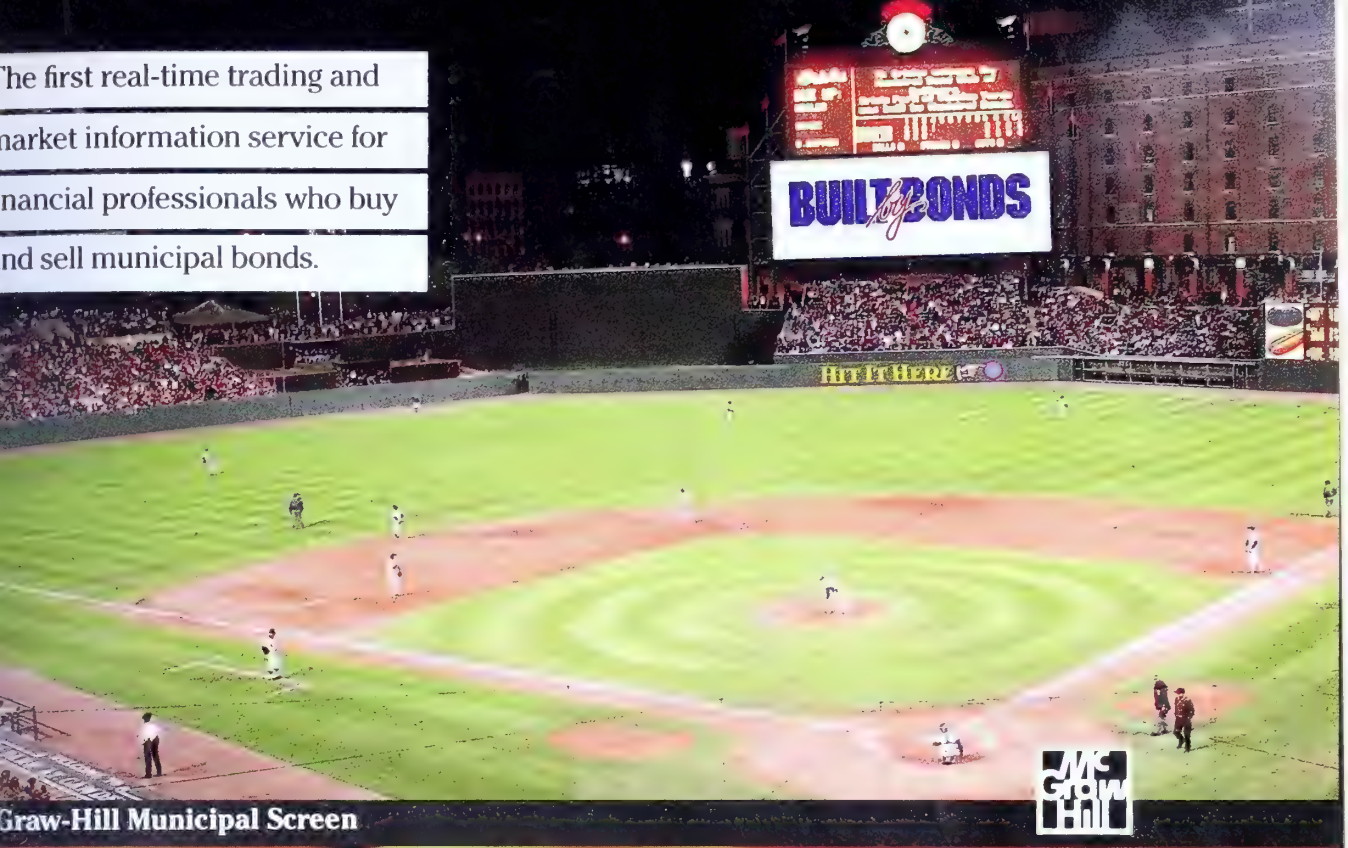
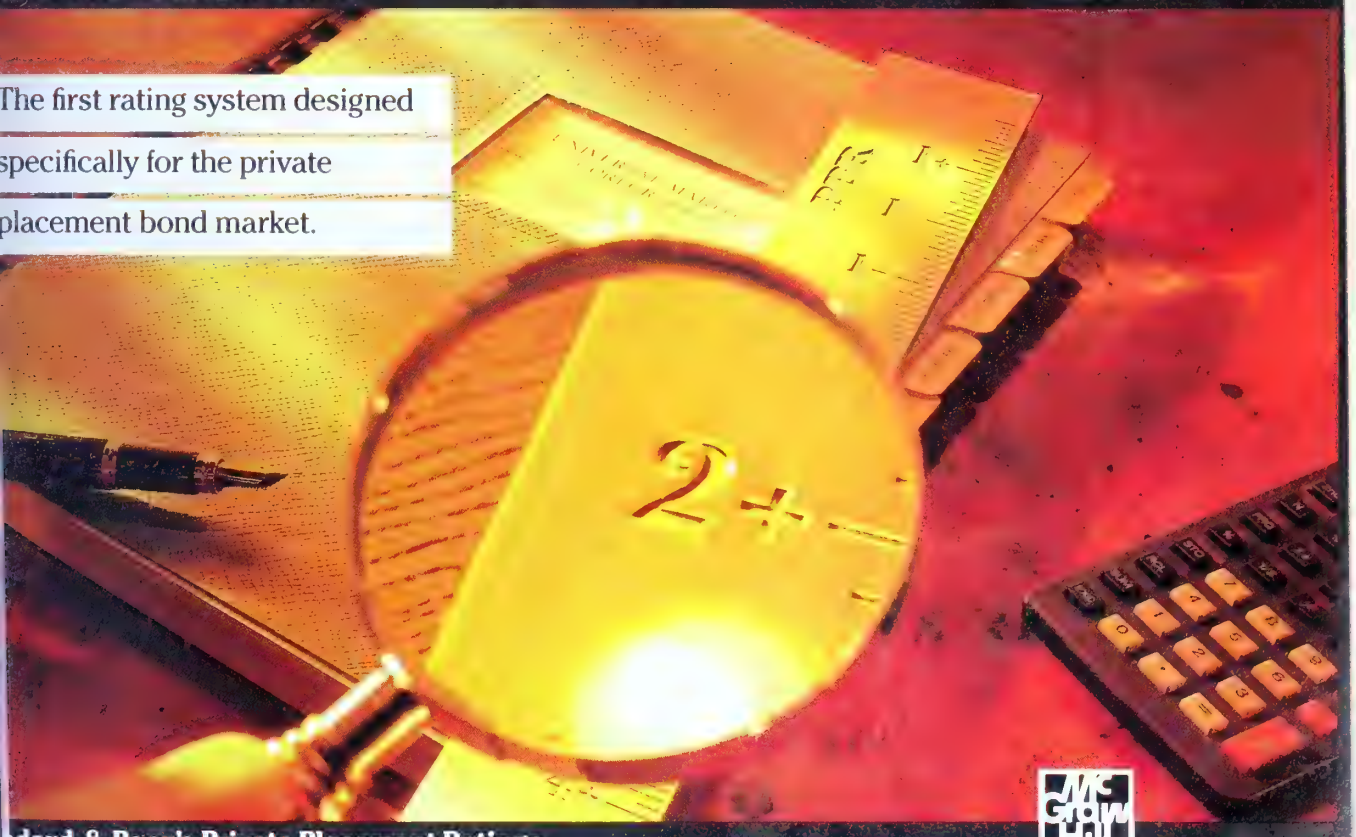
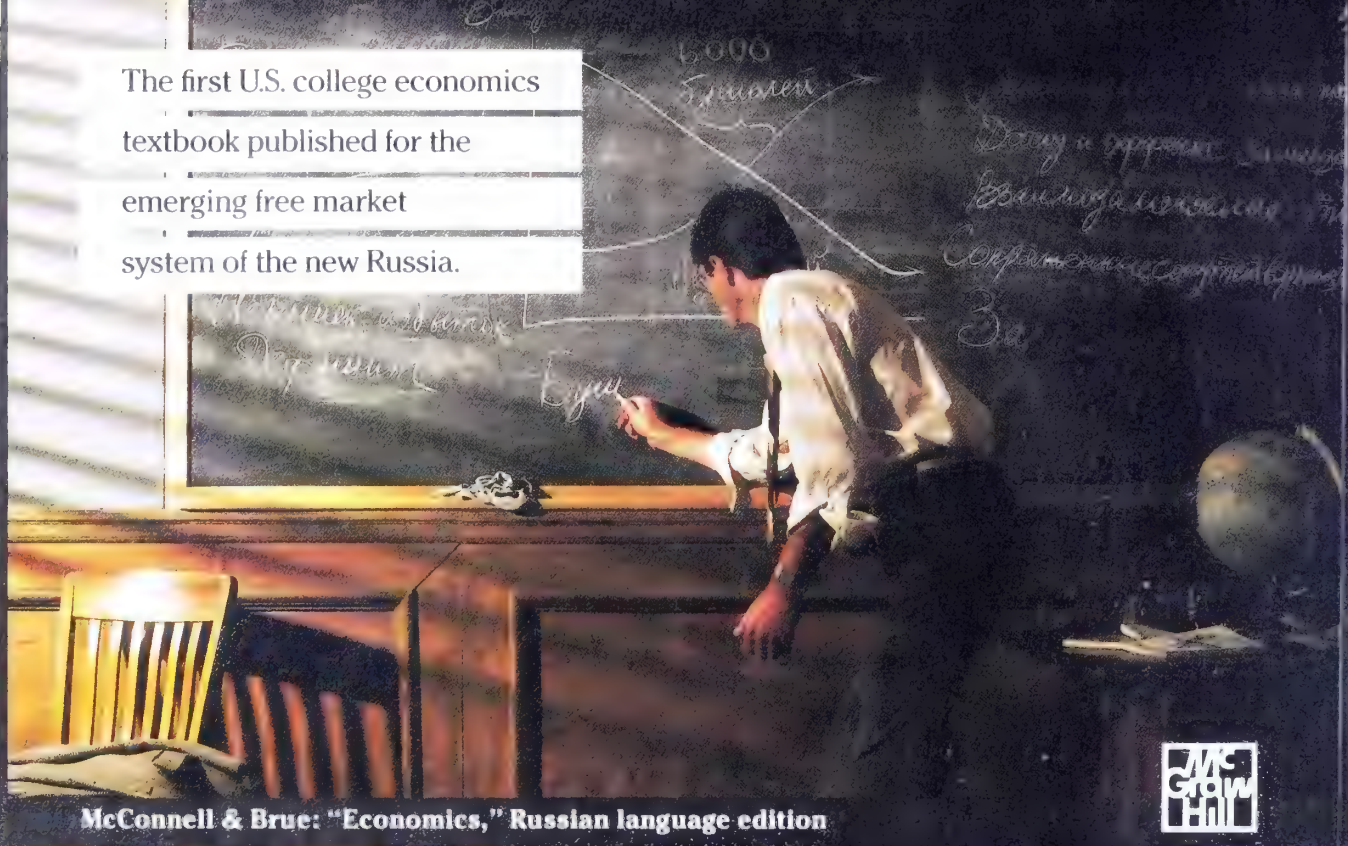


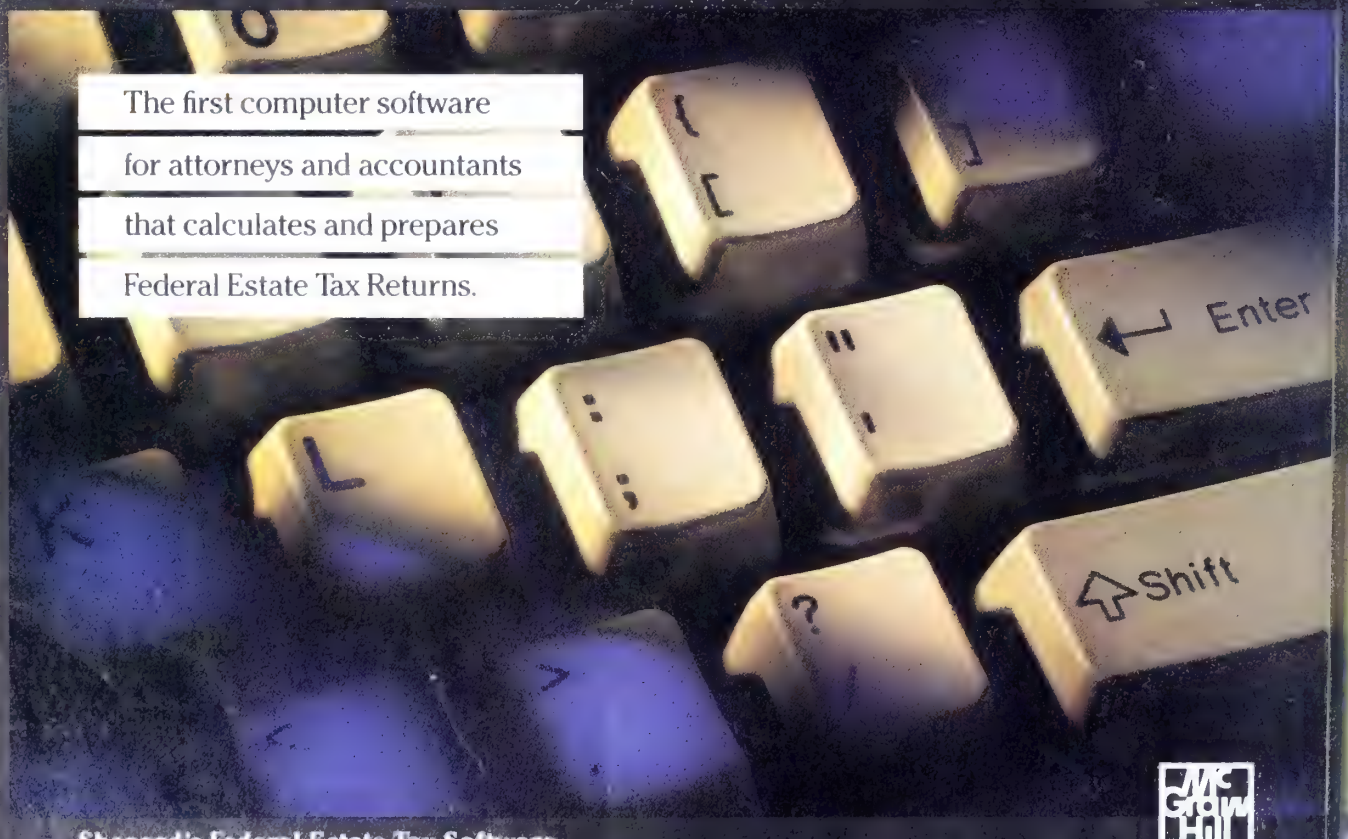
Graw-Hill Municipal Screen



dard & Poor's Private Placement Ratings



McConnell & Brue: "Economics," Russian language edition



Shepard's Federal Estate Tax Software

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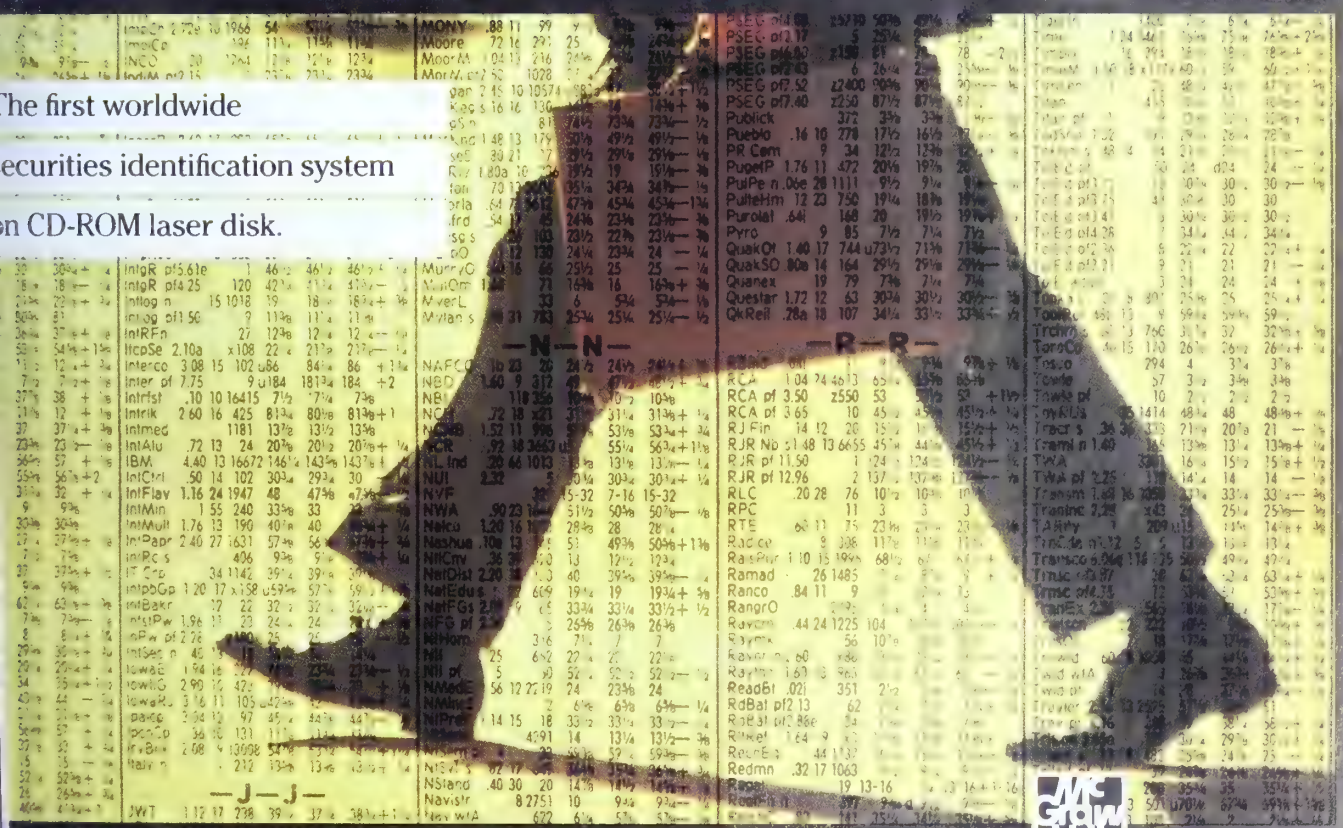

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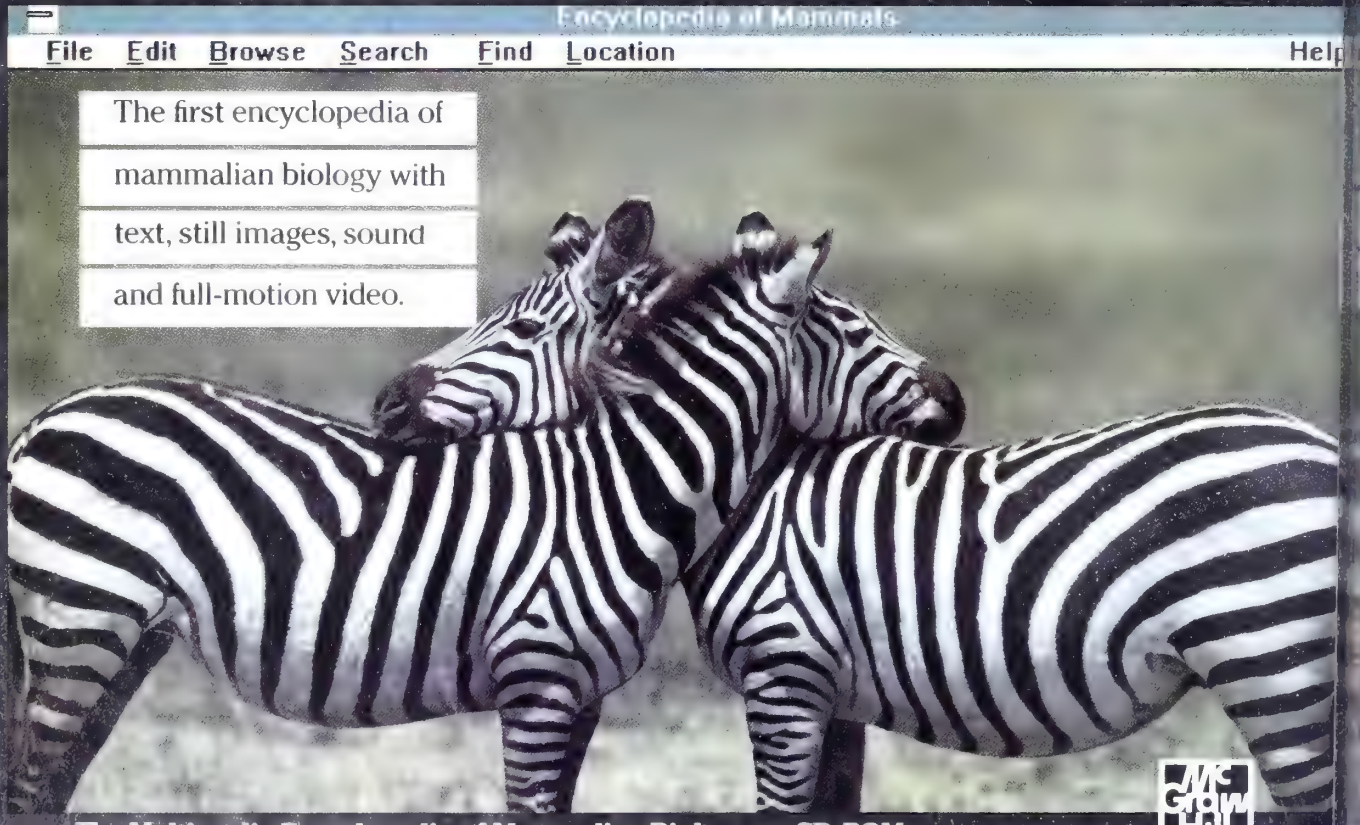
Standard & Poor's Mid-Cap 400 Index at Chicago Mercantile Exchange



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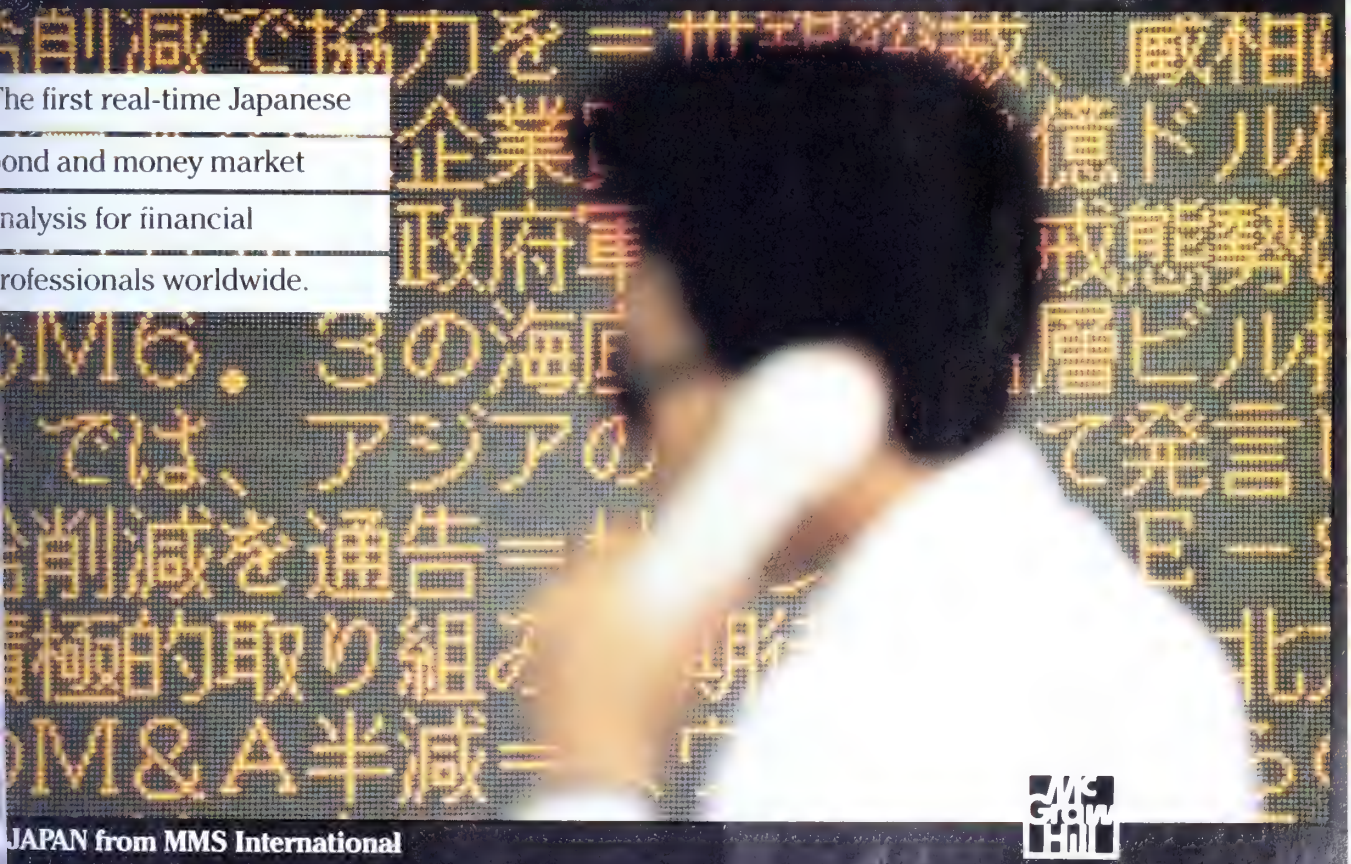

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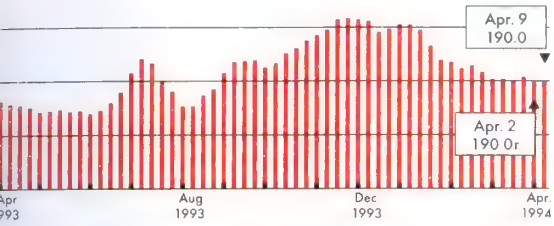
usiness Week Index

DUCTION

from last week: 0%
from last year: 1.1%

1967=100 (four-week moving average)

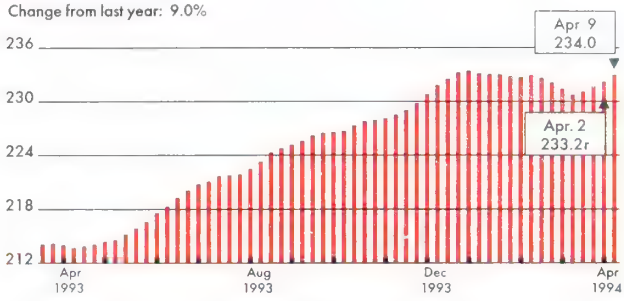


oduction index was unchanged in the week ended Apr. 9. Seasonally output of autos and trucks were down sharply, but that reflected plant for an earlier-than-usual Easter holiday. Coal, electric power, and lumber lso fell. Rail-freight traffic, crude-oil refining, and paper production increased, el output was flat. Before calculation of the four-week moving average, the pped to 189.7 from a revised 189.9.

BW production index copyright 1994 by McGraw-Hill Inc

LEADING

Change from last week: 0.3%
Change from last year: 9.0%



The leading index rose slightly during the week ended Apr. 9. The advance was paced by much stronger growth in real estate loans as buyers rushed to close deals and lock in mortgage rates before further rises in bond yields. Materials prices were also higher, but lower stock prices, higher bond yields, and slower growth in M2 forecast a downshift in economic growth. Before calculation of the four-week moving average, the index rose to 235, from 233.4.

Leading index copyright 1994 by Center for International Business Cycle Research

DUCTION INDICATORS

	Latest week	Week ago	% Change year ago
/16) thous. of net tons	1,910	1,899#	5.7
4/16) units	145,013	125,077r#	33.0
(4/16) units	119,493	105,809r#	43.6
POWER (4/16) millions of kilowatt-hours	53,302	52,423#	4.1
IL REFINING (4/16) thous. of bbl./day	13,485	13,188#	0.6
9) thous. of net tons	20,373#	20,703	10.9
ARD (4/9) thous. of tons	842.5#	878.6r	1.9
/9) thous. of tons	824.0#	815.0r	0.1
(4/9) millions of ft.	464.5#	468.4	0.3
IGHT (4/9) billions of ton-miles	21.9#	21.3	5.3

American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association an Railroads

IGN EXCHANGE

	Latest week	Week ago	Year ago
E YEN (4/20)	103	104	111
MARK (4/20)	1.70	1.71	1.60
POUND (4/20)	1.48	1.48	1.56
FRANC (4/20)	5.82	5.86	5.38
N DOLLAR (4/20)	1.38	1.37	1.26
ANC (4/20)	1.44	1.44	1.45
PESO (4/20)[3]	3.366	3.363	3.093

Major New York banks. Currencies expressed in units per U.S. dollar, except for British ressed in dollars

ES

	Latest week	Week ago	% Change year ago
20) $/troy oz.	371.350	378.500	9.5
AP (4/19) #1 heavy, $/ton	137.50	137.50	29.1
FFS (4/19) index, 1967=100	217.0	217 3	5.4
4/16) ¢/lb.	90.7	90.8	−3.8
M (4/16) ¢/lb.	62.6	62.0	19.7
/16) #2 hard, $/bu.	3.60	3.67	−1.9
4/16) strict low middling 1-1/16 in., ¢/lb.	75.82	72.93	34.8

ondon Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* ias City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (4/15) S&P 500	447.25	446.65	−0.3
CORPORATE BOND YIELD, Aaa (4/15)	7.87%	7.90%	5.6
INDUSTRIAL MATERIALS PRICES (4/15)	98.1	97.9	0.7
BUSINESS FAILURES (4/8)	NA	NA	NA
REAL ESTATE LOANS (4/6) billions	$422.2	$418.9r	3.7
MONEY SUPPLY, M2 (4/4) billions	$3,553.1	$3,553.5r	3.2
INITIAL CLAIMS, UNEMPLOYMENT (4/2) thous	336	331	−9.9

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
INDUSTRIAL PRODUCTION (Mar.) total index	115.6	115.0r	5.1
CAPACITY UTILIZATION (Mar)	83 6%	83.4%	3.0
IMPORTS (Feb.) millions	$50,262	$49,475	12.1
EXPORTS (Feb.) millions	$37,899	$39,306	2.6

Sources: Federal Reserve, Commerce Dept

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (4/4)	$1,148.3	$1,146.8r	10.2
BANKS' BUSINESS LOANS (4/6)	289.1	236 7r	28.5
FREE RESERVES (4/13)	697	781r	−13.5
NONFINANCIAL COMMERCIAL PAPER (4/6)	150.7	147.6r	1.3

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (4/19)	3.71%	3.24%	2.91%
PRIME (4/20)	6 75	6.25	6 00
COMMERCIAL PAPER 3-MONTH (4/19)	4.12	3.95	3.12
CERTIFICATES OF DEPOSIT 3-MONTH (4/20)	4.12	3.89	3.08
EURODOLLAR 3-MONTH (4/15)	3 89	3.90	3.13

Sources: Federal Reserve, First Boston

in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment. Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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The National Arbor Day Foundation

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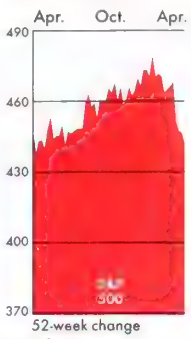
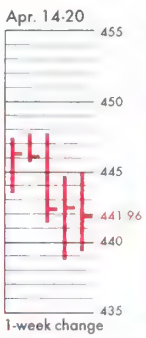
TARY

short-term interest rates
eral Reserve sent the fi-
arkets into a tizzy on
ith yields of 30-year
climbing to 7.42%.
anks raised the prime
5%. The stock market re-
dismay, with blue chips
. The Dow Jones indus-
1 points, to 3620, and
to fall during the next
But options traders were
earish—a positive con-
icator.

STOCKS

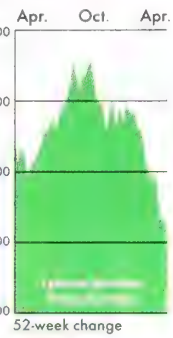


52-week change
−0.4%

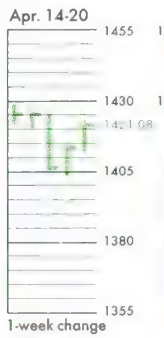


1-week change
−1.0%

BONDS

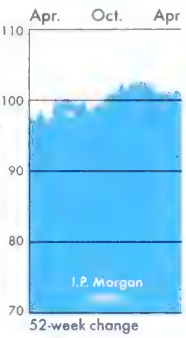


52-week change
−7.5%

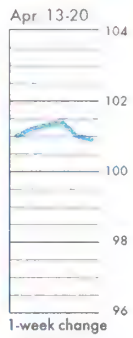


1-week change
−0.6%

THE DOLLAR



52-week change
+3.1%



1-week change
−0.1%

KET ANALYSIS

CKS	Latest	% change Week	52-week
S INDUSTRIALS	3598.7	−1.7	4.6
OMPANIES (S&P MidCap Index)	166.4	−2.2	3.5
MPANIES (Russell 2000)	242.1	−3.0	8.4
NIES (Russell 3000)	254.9	−1.1	0.5

STOCKS	Latest	% change (local currency) Week	52-week
FINANCIAL TIMES 100)	3098.3	−1.5	8.0
KKEI INDEX)	19,882.2	−0.9	0.6
TSE COMPOSITE)	4105.9	−3.4	12.1

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	3.83%	3.64%	2.86%
30-YEAR TREASURY BOND YIELD	7.32%	7.26%	6.74%
S&P 500 DIVIDEND YIELD	2.94%	2.92%	2.80%
S&P 500 PRICE/EARNINGS RATIO	19.9	20.4	23.1

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	464.8	465.7	Negative
Stocks above 26-week moving average	25.7%	31.0%	Neutral
Speculative sentiment: Put/call ratio	0.52	0.49	Positive
Insider sentiment: Vickers sell/buy ratio	2.06	1.99	Neutral

STRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

EEK LEADERS	% change 4-week	52-week	Strongest stock in group	% change 4-week	52-week	Price
RTY-CASUALTY INSURERS	4.5	−11.1	GENERAL RE	12.5	−3.2	118 1/8
REGIONAL BANKS	3.9	−6.0	NATIONSBANK	12.4	−4.3	53 3/8
IAL TELEPHONE COMPANIES	1.6	−3.8	BELLSOUTH	7.4	5.3	59 1/2
MANUFACTURING	1.2	−17.2	LIZ CLAIBORNE	11.9	−29.3	24 3/4
NE INSURERS	1.1	−4.1	AMERICAN INTERNATIONAL GROUP	4.2	−0.3	87 1/8
EEK LAGGARDS	**% change 4-week**	**52-week**	**Weakest stock in group**	**% change 4-week**	**52-week**	**Price**
UILDING	−22.8	−7.4	KAUFMAN & BROAD HOME	−27.5	−2.1	17 1/8
NDUCTORS	−20.6	14.1	NATIONAL SEMICONDUCTOR	−25.6	39.4	18 1/8
ACTURED HOUSING	−20.3	4.0	SKYLINE	−23.5	−11.7	17 7/8
TER SOFTWARE AND SERVICES	−19.8	9.1	NOVELL	−33.4	−49.8	15 13/16
AND MOTELS	−19.7	27.6	HILTON HOTELS	−21.5	14.8	53 1/4

AL FUNDS

MORNINGSTAR INC

otal return	%
EQUIFUND ITALIAN NATL. FID. EQTY.	12.3
RT TIGER	6.6
EQUIFUND HONG KONG NATL. FID. EQ.	4.8

al return	%
IDAS GOLD	57.6
ON STRATEGIC INVESTMENTS	56.7
SERVICES WORLD GOLD	54.0

LAGGARDS

Four-week total return	%
LEXINGTON STRATEGIC INVESTMENTS	−16.9
UNITED SERVICES GOLD	−16.8
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−16.5

52-week total return	%
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−29.7
PILGRIM CORPORATE UTILITIES	−22.8
EXCEL VALUE	−17.5

IVE PORTFOLIOS

DRI/McGRAW-HILL

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Foreign stocks	Gold	Money market fund	U.S. stocks	Treasury bonds
$12,065	**$10,977**	**$10,204**	**$10,184**	**$10,038**
+0.41%	−1.30%	+0.04%	−1.12%	−1.33%

is page are as of market close Wednesday, Apr. 20, 1994, unless otherwise indicated. Apr. 19. Mutual fund returns are as of Apr. 15. Relative portfolios are valued of Apr. 19. A more
is include S&P 500 companies only; performance and share prices are as of market close detailed explanation of this page is available on request.

NOW, SOUTH AFRICA MUST FREE ITS ECONOMY

"All I want is a three-bedroom house with indoor plumbing and some privacy," says Rebecca Matlakala, who lives in Alexandra, a crime-ridden black township outside Johannesburg. It's truly amazing how universal the desires of people are around the world, including South Africa. After a century of apartheid, Matlakala now has a chance of seeing her dream come true.

But only if the new government gets its economic policies right. And only if Pretoria can reestablish control over the townships, where criminal and political violence are approaching epidemic proportions.

Surprisingly, getting the right economic policies in place may solve both problems. After the Apr. 27 elections, Nelson Mandela will face two complex and contradictory demands: increase job opportunities for South Africans and provide immediate benefits to his impatient followers. One calls for long-term economic growth. The other calls for quick redistribution of resources.

This economic Gordian knot can be cut clean through if Mandela is willing to use the sharp sword of global competition. The closed South African economy today resembles that of Mexico or Argentina circa 1970. Walls of high tariffs protect inefficient local businesses, while the state owns or heavily subsidizes many industries. In addition, near control of the world gold and diamond markets provides the taxes that have kept it all going.

Until now. To achieve higher growth and more job opportunities, South Africa must become a more open, expor en economy. With its rich resources, excellent infr ture, top-rate services, and inexpensive, skillful labor the country stands a good chance of becoming Africa real economic "tiger."

But first must come political stability, and that lead to economic redistribution. The African National Cong counting on a "post-apartheid dividend" to generate o billion for a huge public-works program. Funds woul from defense cuts plus massive foreign aid and inves

It's a fanciful dream. Expenses for law and order a ly to rise, not fall, as the new government cracks d crime and reestablishes control in the townships. And tors, both domestic and foreign, are bound to wait n if not years, to see if South Africa becomes another or degenerates into another Lebanon.

Privatizing the state's industrial assets could pro answer to this dilemma. It could generate big bucks ly for public works and help build a larger African class. Privatization could also provide carrots to enti eign companies to invest in South Africa, alleviating t unemployment.

South Africa seems to be on the verge of a major in shifting to majority African rule through open de ic elections. Beyond that, it must cement this political with an equally courageous economic miracle. One c wish South Africa, and Rebecca Matlakala, "Godspee

HEALTH CARE: MARKETS ARE WORKING AGAIN

Whoa! Wait a minute. Can this be true? Health-care costs rose at a 3.3% annual rate in the first quarter, the lowest rate of increase since 1973. Even better, in March they were up a measly 0.2%, actually below the overall consumer price index. What's going on? Has half the health-care crisis—the cost part—already been solved?

Sorry, Beltway bureaucrats, but the markets appear to be working once again. Sure, the Hillary factor has helped. Fear of heavy government control is tempering price hikes. But the real agent of change is Corporate America. Determined to lower its health costs, business ignited a fire of competition among health-care suppliers. Just two years ago, medical costs were rising at double-digit rates. All gone now.

Strange how Washington advocates of price controls were just the other day arguing that competition alone could never corral rising costs. Why? Hospitals would simply "cost-shift" expenses incurred on patients not covered by insurance over to the corporate health bill. Suddenly, it's not happening.

So maybe the country doesn't really need a new, omnipotent government-run bureaucracy controlling its health care. Sure, dealing with insurance bureaucrats can be frustrating, but imagine dealing with the folks from the motor vehicle bureau? And price controls don't seem to be essential

This sharp slowdown in runaway health care inflati America time. The country doesn't have to rush into voluted, who-can-understand-it medical system if it is no to bankrupt itself on sky-high health-care costs.

What remains is mostly an insurance problem. W due dispatch, Congress should outlaw insurance exc for pre-existing conditions, make insurance portable, courage small businesses to pool their purchases of ins so they can offer low-cost coverage to their employee practice reform is in order as well. These steps wou long way toward increasing access to health care fo not covered. If they don't, we can revisit the proble few years.

One more thing. If health-care inflation is the lowe years, maybe it's time for health maintenance organi and preferred-provider organizations to start cuttin bills to Corporate America. Companies could pass t ings along to their employees—who haven't had a dec hike in years—owing, in part, to rising medical costs their employers. Not only would this be an added the economy, but it would make a lot of folks happi

SS WEEK
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THE CRISIS AT DIGITAL EQUIPMENT

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BusinessWeek

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THE PAIN OF DOWNSIZING

at it's really like to live through the struggle to remake a company

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ARE YOU CUSTOMERIZED?

1. Do you have as many customers as you want?

☐ Yes ☐ No

Can a bottom line be too healthy? Of course not. And neither can a growth-oriented company have too many customers. They're the engine that generates revenue.

2. Are your customers as loyal as you want?

☐ Yes ☐ No

It's one thing to gain customers. It's another to keep them. The strength of your business depends largely upon your ability to sustain a relationship with customers.

3. Do you generate as much business from each customer as you want?

☐ Yes ☐ No

A critical component of business growth is increased sales content. To maximize each business opportunity, you need a way to leverage your entire organization—to bring it totally to bear at the point of customer contact.

4. Do you really know what your customers want?

☐ Yes ☐ No

Are you alert to *every* product your customers could use? *Every* service that might interest them? *Every* transaction they're prepared to make? *Every* sale they'd allow you to clinch? Are you thoroughly tapped into your market?

5. Does your entire organization know what your customers want?

☐ Yes ☐ No

A customer orientation has limited value unless it's embedded in the very fiber of an enterprise—at all levels, and at every place that directly or indirectly impacts the customer.

6. Is your information strategy focused on helping you hear what customers and markets are trying to tell you?

☐ Yes ☐ No

The next best thing to reading your customers' minds is listening to what they're saying. But unless you're constantly tuned in to customers' signals, you're missing messages that could guide you to greater results for your business.

7. Can your organization respond quickly to wh customers and markets are telling you?

☐ Yes ☐ No

When the flow lines of your information syste are not within your customers' reach, you won't always sense when opportunity knocks. But even if you do, getting the message is not enough. If you can't reply rapidly to market cues with information products and services, revenue opportunities are lo

8. Does your information strategy enable you to proactively deliver information to your customers?

☐ Yes ☐ No

Many business plans underestimate the power of information to build customer relationships. But imagine the advantage of an information technology strategy that transforms information into customer-generating, revenue-generating fuel.

9. Are the full capabilities of your organization accessible to your customers at all your field locations?

☐ Yes ☐ No

An office. A branch. A retail site. To a custom that's your company. One small part of the whole. Which is why you need to leverage your entire orga zation by extending its capabilities to each point of customer contact.

10. Does your information strategy reflect the bottom-line importance of customer service?

☐ Yes ☐ No

Business is built on customers. Without them, there is no bottom line. Government is also built on customers, the public. And whether you're in th business of commerce or the business of governme no objective of an information strategy is more fundamental than enhanced customer service.

The Bottom Line. *If you answered* No *to any of these questions, you're not yet customerized. But you might well agree that this simple test suggests the enormous advantages of becoming customerized. And as the leader at customerizin business and government, Unisys will work with you to provide the answers you need.*

There's a word so powerful it answers all the questions on this test.

Customerize.

This test poses tough questions out customer service. So does the real-orld business environment. That's why isys is introducing an answer which n transform your customer service into competitive advantage: CUSTOMERIZE.

When you CUSTOMERIZE, you put the stomer at the heart of your world, ther than the periphery. By embedding stomer service objectives within your formation strategy, Unisys will help you tend the full capabilities of your enter-ise to the points of customer contact—e points where business is won or lost. e'll help enhance your ability to receive formation from your customers and mmunicate information to them, creat-g an information flow which leads to bottom-line results. As customer service rises to a higher level, so will your ability to make new customers, build your relation-ships with them, and generate revenue.

How to begin? The perfect starting place is our CUSTOMERIZE℠ assessment. Experienced Unisys business consultants will team with you to evaluate the infor-mation flow between you and your customers, identify any barriers to communication, and design technology solutions tied to achievable business goals. We'll bring a standards-based, vendor-independent commitment to the assign-ment. And we'll apply our industry-leading expertise at ensuring that an information strategy pays off, not merely shows off.

cus·tom·er·ize \ kŭs'-tə-mə-rīze' \ *vt* **1:** to make a company more responsive to its customers and better able to attract new ones **2:** to customerize an organi-zation's information strategy, e.g., to extend systems capabilities to field locations and other points of customer contact and support **3:** what Unisys Corporation does for a growing roster of companies, and government agencies, worldwide ***syn*** see CUSTOMER SERVICE. COMPETITIVE EDGE. BUSINESS-CRITICAL SOLUTIONS. REVENUE GENERATION

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BusinessWeek
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Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

FUNNY BUSINESS

HELLO, NEXTEL? NASDAQ CALLING

In late February, MCI Communications announced that it planned to pay $1.3 billion for a 17% stake in Nextel Communications, giving MCI a foothold in wireless communications. But the deal is giving some people a headache.

The NASDAQ exchange is probing unusual trading in Nextel's stock shortly before MCI's announcement, Nextel says. For four days in early February, Nextel trading volume was double its usual level. Plus, the stock jumped more than $2 per share, to 38¾, on Friday, Feb. 25, the last trading day before the Monday, Feb. 28, announcement. When the news broke on Feb. 28, the price soared to 44¼.

Insider-trading investigators usually track down the buyers and try to draw connections with those who knew about the transaction. NASDAQ could not be reached for comment, and Nextel would say no more. MCI says it hasn't been officially notified of the inquiry. Richard Liebhaber, MCI's chief strategist, says he doubts any leaks came from MCI. "I think we're going to go through hell on Nextel," he says. *Mark Lewyn*

TAXES AT WORK

CONGRESS IS FLOGGING A DEAD SCREWWORM

Congress, ever vigilant against waste, nevertheless has had no trouble ladling out research funding grants for agriculture. Take the $34.6 million approved for screwworm research, even though the beef-infesting parasite has been eradicated in the U.S., according to Citizens Against Government Waste. The Agriculture Dept. says it's needed in case Mexican beef enters the country.

Representative Joe Skeen (R-N.M.) got $200,000 for university locoweed research—the plant apparently makes cows dizzy causing some to miscarry. Skeen aide Sherry Kiesling defends this as "a worthwhile expenditure." And Senator Thad Cochran (R-Miss.) pushed through a $200,000 grant to study the hunting of bugs in grain silos by sound detection. Cochran aide Elizabeth Morra says this is "a serious project." Still, CAGW's Tom Schatz argues that the agriculture industry should foot the bill, not taxpayers. *Richard S. Dunham*

TALK SHOW

What I remember most about Nixon is how bad it was to be in the business when he was president.

—Hugh Johnson, chief investment officer of First Albany, recalling the anemic market performance of those days

ROCKY: *The Bucyrus brouhaha is heating up*

SLUGFESTS

DID GOLDMAN SACHS GILD THE LILY?

It's not every day that Goldman Sachs, the quintessential white-shoe Wall Street firm, gets accused of underhanded dealings. But that's the case with Goldman-controlled Bucyrus-Erie, a 114-year-old maker of mining equipment that the firm picked up in a 1988 buyout for what critics say was a mere $1 million.

Bucyrus' biggest bondholder ($60 million face value), Jackson National Life, accuses Goldman in a lawsuit of masking the South Milwaukee company's sorry financial prospects and driving it into Chapter 11 by loading on too much debt. The situation is heating up: On May 11, the bankruptcy judge will hear a motion by Jackson which wants its money back in full—to conduct an examination of the Bucyrus controversy.

Jackson points to a 1990 memorandum by the Goldman fund manager Mikael Salovaara that cited Bucyrus as a trouble outfit. But two months later, when Jackson bought the Bucyrus bonds, it claims Goldman gave it no indication that the company was troubled. "They were telling two different stories," says John Stark, who manages the investment for Jackson. The insurer also grouses that the Salovaara memo boasts that Goldman was making 35% annual returns on Bucyrus, presumably by selling the company bonds.

Goldman and Salovaara dismiss the charges, arguing that the memo reference was to the high rates Bucyrus was paying (10 points over comparable Treasuries), not its ability. To Goldman, Jackson is a sophisticated investor that knew the risks of the Bucyrus deal and today wants to blame others for its folly.

REALITY CHECK

NEWT GINGRICH says the new world trade pact signed by 118 nations in Marrakech Apr. 15 would create a "Third World-dominated, dictatorship-dominated system" to settle trade disputes. The Georgia Republican, who is House Minority whip, says he opposes creation of a World Trade Organization because it would establish a "United Nations of world trade" that could declare U.S. trade practices improper. Gingrich insists he is "for world trade, but...against world government."

NETTLED: *Newt*

IN REALITY, the U.S. has surrendered no sovereignty of its laws in the new agreement. If anything, the new WTO will make it easier for the U.S. to press complaints against other nations for unfair trade practices. Under the current General Agreement on Tariffs & Trade (GATT), any nation can veto a consensus of the body. With the new system, WTO decisions stand unless a majority of countries block them, and the U.S. has brought the majority of dispute claims under GATT. Also, free trade tends to break down dictatorships and authoritarian regimes, giving people economic freedom that leads to calls for other freedoms. *Douglas Harbrecht*

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Up Front

TRADING PLACES

A COMMODITY ODDITY—SHARING THE SPOILS

Surging commodity-trading volume has piled up tons of extra cash on exchanges. So the legions of small-fry individual traders at such places as the Chicago Mercantile Exchange, which projects up to $50 million in extra money this year from fees on trades and the like, want to skim off some of the excess for exchange members through dividends. The New York Merc's directors have tentatively O. K.'d such a switch, the Chicago Merc is mulling the notion, and the Chicago Board of Trade may follow.

THE PITS: *Class clash*

But the dividend proposal has set off a din of protest that makes bidding in the pits sound like a lullaby. Objecting are big firms such as Smith Barney Shearson, which account for much of the exchanges' volume. The firms hold only a minority of the seats, so they would get only a fraction of the dividends. They favor the status quo, where the extra bucks usually go for things such as trading-floor upgrades. Says Smith Barney Managing Director John Benjamin: "It's sort of like Robin Hood, taking from one and giving to another." But if big firms are miffed, growls Chicago Merc board member Merton Miller, "let them set up their own exchanges." While that's impractical, at least they couldn't be outvoted then. *Greg Burns*

BRUSHED OFF

DENTAL SCHOOLS ARE FEELING THE BITE

If you're in the health-care biz, it's hard to find any good news in President Clinton's proposed reforms. Unless you're a dentist, that is.

Dentistry is something of a shrinking industry these days. Six dental schools have shut since 1987, including Georgetown and Loyola of Chicago, leaving 54 in the U. S. The number of medical schools (now 125) has fallen by only one in the past decade. The ranks of first-year dental students (4,100) are down 23% from 10 years ago, while medical-school entering enrollment is flat at 17,000. The number of dentists per 100,000 population is waning.

SAY AHHH: *Demand is down*

Why? Dentists themselves think they are too numerous, so many dental schools don't get needed alumni support. "If there are two dentists in one town, they each think there are too many," says Dr. Richard D'Eustachio, president-elect of the American Dental Assn. They may be right, up to a point. Thanks to fluoridated water, 50% of school-age kids don't have cavities. But an aging population may spur demand for dentistry. Health-care reform could, too. The Clinton plan covers kids for preventive services and everybody for emergency treatment. □

DRAWN AND QUARTERED

PLANE SPEAKING

AT JAL, MAGIC FINGERS IN FIRST CLASS

A meal and two movies after takeoff, with Tokyo still hours away, you're still sleeplessly tossing and turning as far as your seat will allow. You could use a little shiatsu, maybe? Japan Airlines has just the thing for you.

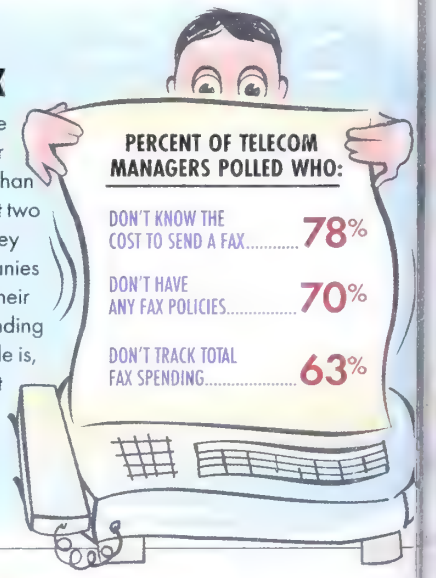
Since Apr. 1, on some Lo don-Tokyo and New York-T kyo flights, JAL's first-cla customers can take turns se tling into what the airlin claims is the world's first ai borne automatic-massage sea Two wheels mounted in th back of the seat travel fro the small of the back to th nape of the neck to give yo a 15-minute rubdown th runs from shiatsu-style stead pressure to light thumping a rotating massage. JAL co missioned Marutaka, a med cal-equipment maker, and Ko to Kogyo, a furniture make to develop the "sky massage Price tag: $380,000. Now, fo JAL jumbos have one eac with a fifth kept in reserve. you're stuck back in busine class, though, you'll just ha to struggle into the aisle a try to stretch. *Larry Holyo*

THE BIG PICTURE

IGNORANT OF THE FAX

Fax use in corporate America surges ever higher, up by more than 40% during the past two years. A recent survey of 400 large companies shows that 36% of their total telephone spending is fax-related. Trouble is, the companies don't know much more than that about this spiraling cost item.

DATA: GALLUP ORGANIZATION



FINDYNOTES

Ketchup sales, 1993: **$413 million**, down **1.7%** over 1992. Salsa sales, 1993: **$634 million**, up **10.5%**

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Readers Report

EDITOR'S MEMO

'EXCELLENCE IS A WAY OF LIFE'

The National Magazine Award for General Excellence is the highest honor a magazine can win. Presented under the auspices of the Graduate School of Journalism at Columbia University, it is the Pulitzer Prize of our business—the very emblem of editorial quality. Over the past eight years, BUSINESS WEEK has been a finalist for this accolade six times. This year, I am proud that we won the grand prize for magazines with a circulation of more than 1 million.

The judges' citation reads: "Excellence is a way of life at BUSINESS WEEK. The editors continue to find new ways to offer readers more—groundbreaking stories, prescient information, in-depth reportage. BUSINESS WEEK is as resourceful as it is distinguished."

THE ELEPHANT: THE NATIONAL MAGAZINE AWARD

It is not just the National Magazine Award we are celebrating these days. We were also recently notified that we are finalists for three Gerald Loeb Awards, perhaps the most significant competition devoted to business journalism. No other magazine has ever been a finalist three times in one year for these awards, which will be presented in June by the Graduate School of Management at UCLA.

There's more. Two weeks ago, our staff won the Computer Press Association Award for the best article in the breaking-news category—for our story on IBM's appointment of Lou Gerstner as CEO. We are also being honored with a first-place prize for personal-finance reporting, awarded by American University and the Education Foundation of the Investment Company Institute. And just this week, our international staff won another award from the Overseas Press Club—the 11th in the past 11 years.

All of us at BUSINESS WEEK take enormous pride in these honors and we are grateful to have been chosen. But no award, not even the National Magazine Award, is a culmination. Our goal, as always, is to create the best possible magazine for you, our readers, every week.

Stephen B. Shepard

Editor-in-chief

AND WORTH EVERY PENNY OF IT

Every year your executive-pay issue infuriates me—but not for the reason you may expect ("That eye-popping executive pay," Special Report, Apr. 25). The only stock I own is Disney. During Michael Eisner's tenure, my holdings' value has multiplied sixteenfold. Yes, there have been some unremarkable years, but the phenomenal ones have more than compensated. Is Eisner worth $200 million? He is to me.

Professor Charles Handy says high C[EO] pay is obscene? What's obscene is carpi[ng] by unproductive academics who add ze[ro] to anyone's net worth but their own.

Paul Doeri[ng]
Rochester, N.[Y.]

HEDGE FUNDS: A CAUTIONARY TALE

Now that we know hedge funds c[an] lose money, your readers may b[e] interested in the following scenario ("T[he] Market's Revenge," Cover Story, Ap[r.]

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18). Assume an investment of $100,000 in a typical hedge fund with a 1% management fee and a 20% incentive fee. The fund's gross profits are 30% for each of the following three years. Then in the fourth year, the fund has a loss of 30%.

At the end of this period, the investor will have about $133,500, or an average annual compound rate of return of 7.48%. The fund manager will have earned about $28,500 in fees and be required to account for about $57,200 in losses against future profits.

History tells us that this accounting will probably not take place and that the fund manager will probably "fold his tent and silently steal away."

David S. Logan
Chicago

TRADING ONE MYTH FOR ANOTHER?

In "The myth that may doom Clinton's Presidency" (Economic Viewpoint, Apr. 18), Paul Craig Roberts continues to believe his own myth about "supply-side economics." He seems blind to the facts that the Reagan Administration followed a simple Keynesian economic precept taught to undergraduates: Run the government deficit up to record post-World War II levels and you will stimulate aggregate U. S. demand. Unfortunately, as we found out in 1990, this type of growth is unsustainable because it is consumer-, not investment-, driven.

Richard J. McCann
West Sacramento, Calif.

To quote former President Reagan: "There he goes again."

Paul Craig Roberts' articles remind me of the old tactic used by economists in the Soviet Union: Repeat a half-truth often enough, and with time, it becomes accepted as the truth.

Thaddeus Swiecki
Tempe, Ariz.

MAKING A KILLING ISN'T A CRIME

Your piece on Hillary Clinton's previous investment activities ("Hillary Clinton, go-go-getter," Top of the News, Apr. 18) was alarmingly shallow.

You cite several highly profitable investments made by Clinton, implying that the results must indicate some wrongdoing on her part. You seem to feel that the fact that Clinton, while a partner in an important law firm and the wife of the governor of Arkansas, was well-connected is a violation of a cryptic ethical code that BUSINESS WEEK and the media in general have determined should be followed by high-profile individuals and couples.

The article (attributed to five BUSINESS WEEK staffers) three times refers to unnamed "experts" who seem to draw no conclusions other than the fact that the Clintons as a young couple were as interested in establishing a comfortable net worth.

What is most striking about your article is its hypocrisy: Why assert there is something wrong about people turning a huge profit in the various investment arenas when, for the most part, it is precisely the desire to do so that motivates people to subscribe to BUSINESS WEEK?

Seth Ruffer
Bayside, N.Y.

WHEN IRWIN JACOBS WASN'T SO FRIENDLY

It is heartening to note that Irwin Jacobs ("A couple of old raiders hitch up again," Top of the News, Apr. 4) is focusing now on friendly takeovers.

My late husband was a victim of Jacob's hostile takeover of AMF Inc. in 1985-86. To see the company he had served for almost 30 years decimated was more than he could cope with.

Jacobs was only 43 years of age at that time. Thank heaven he no longer wants "to cause people trouble."

Frances V. Epstine
Osterville, Mass.

CLEARER CONNECTION FROM AT&T

Your article "AT&T is no smooth operator in Europe" (International Business, Apr. 11), wrongly stated that AT&T "will soon shift its efforts away from equipment sales into services."

Quotes from me that appear to support your thesis send a different message when my title is accurately given. I am not head of AT&T's European network services business. I am head of European equipment business, Network Systems International.

As competition emerges in Europe, an operator's expenditures on public switching equipment will indeed "become a smaller part of [an operator's] investment, and there will be a movement toward revenue-generating services," as I said. This is meant to underscore that operators' total investments in telecommunications equipment will grow, with switching investments representing a smaller piece of a larger solution.

Daniel R. Hess
President & CE
AT&T Network Systems International
The Netherlands

CORRECTIONS & CLARIFICATIONS

Those who sign up with AT&T for long-distance service ("How to dial your way onto a plane," Personal Business, Apr. 11) are offered triple frequent-flyer miles for the first month.

A LESSON IN CONTRASTS

Your magazine had two stories offering an excellent contrast. One was "Lou Gerstner unveils his battle plan" (Information Processing), and the other was "Toyota retooled" (The Corporation, Apr. 4). Gerstner engineered a massive bloodletting, but no progress has been made beyond what was under way under [former CEO John F.] Akers.

In contrast, Toyota has muscled through its morass "without closing a single factory or laying off a single worker."

Zaki Mustafa
Corning, N.Y.

THIS BABY CRAWLS AHEAD OF THE PACK

Regarding your article "The Baby Bell that's still crawling" (Information Processing, Apr. 11), NYNEX is doing better than you suggest.

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John M. Celentano
President
C2I Customer Information Inc.
Randallstown, Md.

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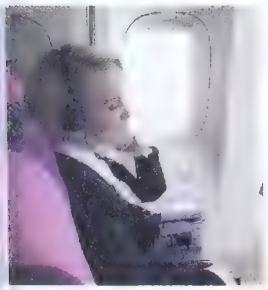

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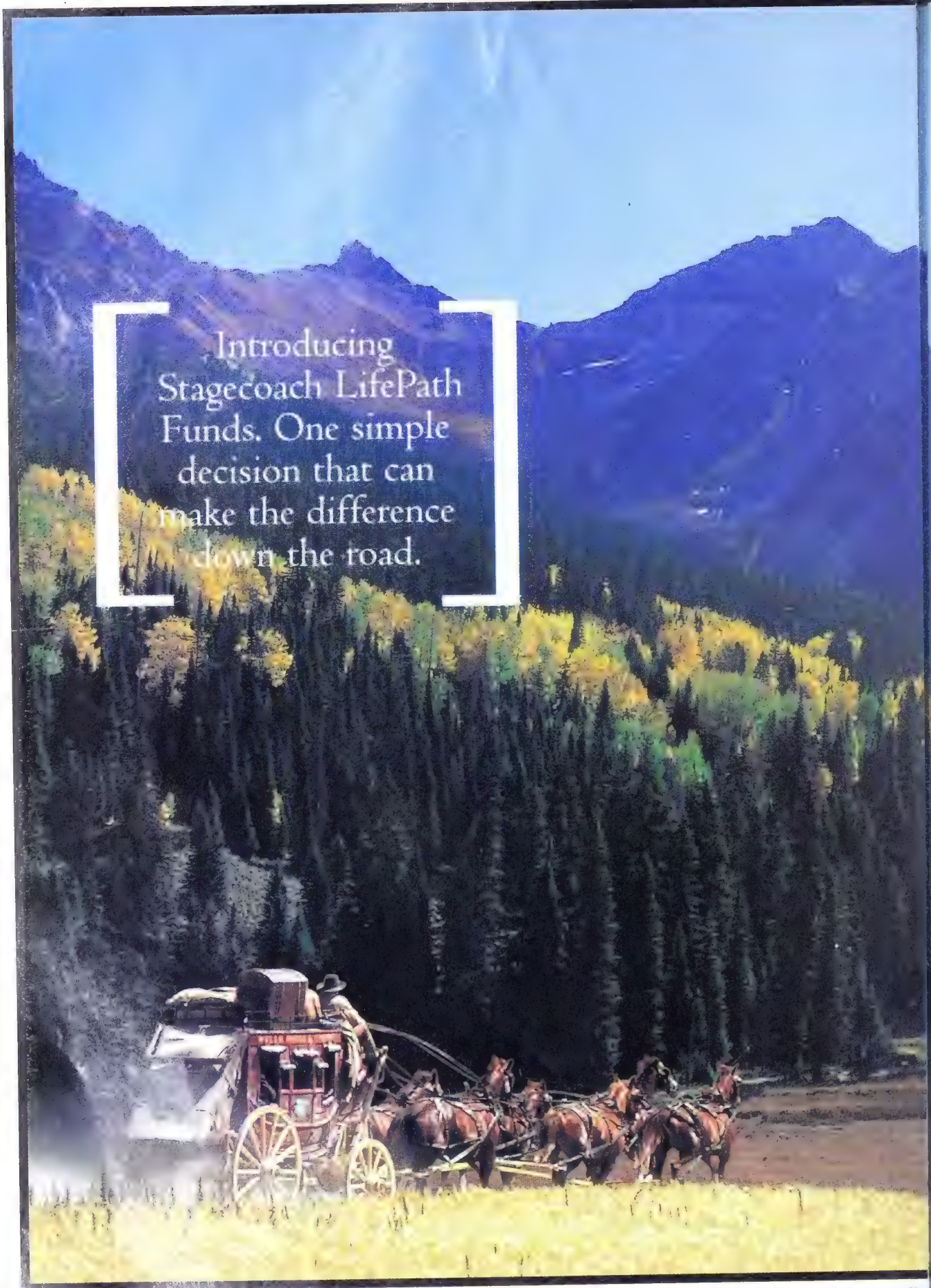

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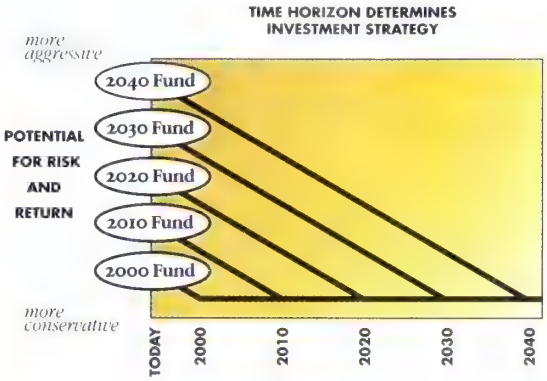

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THE DISTURBING DRIFT OF OUR FRAGILE DEMOCRACY

n his ambitious book, *Divided We Fall*, Washington reporter Haynes Johnson writes that on the eve of e 1992 Presidential election, "seven t of ten Americans believed the coun- y was on the wrong track." Evidently, e three who didn't believe that must ve been asleep for the previous sever- years. A seemingly intractable reces- on was destroying jobs and lives ound the nation as all-too-familiar long- rm national pathologies—violent crime, cial conflict, inner-city decay, failing hools—fed frustration and anxiety.

Johnson spent much of 92 talking with scores people in 15 states, and found them profoundly gry and bitter. They strusted politicians and ubted government's will ability to meet chal- nges. In their eyes, as e country spun out of ntrol, Washington re- ained remote from the ncerns of citizens like em.

Such feelings, of urse, meant victory— wever narrow—for Bill nton, who promised to boldly to create jobs d attack long-neglected oblems. *Divided We ll* is in part a report card on President nton's first year. More important, it is o a thoughtful, wide-ranging analysis America's manifold troubles and the bedded political obstacles to coping th them. Finally, it is something of a rning that unless Americans can unite d at least start curing their ills, the litical system may tear itself apart. re conservative readers will probably like much of what Johnson says, but readers should find his book thought- voking, informative, and so persua- ely pessimistic as to be disturbing.

Johnson clearly likes the President, om he interviewed for the book, and ne of his themes echo Clinton's rheto- . He acknowledges early "missteps"— soothing term for the tragicomic ite House blunders that eroded pub- confidence. But he gives Clinton an A h for effort ("his presidential agenda remains the most ambitious in decades") and first-year achievement ("his legisla- tive success was the greatest since Dwight D. Eisenhower").

While Johnson isn't entirely wrong here, he downplays matters that still cost Clinton potential support. The Pres- ident's tax-now-save-later budget, for example, sticks close to traditional polit- ical game-playing. And Johnson wrongly chastises Ross Perot for deriding Clin- ton's dopey proposal for a "trust fund" to pay off the deficit. Like Clinton, he often calls for "hard choices" and "sacrifice"— new code words for further assaults on middle-class taxpayers. More than once, he criticizes business' downsizing, with its permanent loss of jobs, without ac- knowledging the productivity gains that will translate into higher incomes and greater competitiveness. He is right, though, to echo Clinton's criticism of the Reagan and Bush Administrations' fail- ure to plan to ease the impact of de- fense-spending cuts on employment.

Johnson fears that "another failed presidency" would further inflame and divide the nation. To succeed, Clinton must build political unity. But, Johnson notes, when opinions and interests clash as they do today, consensus comes only after hard negotiation and compromise. And U. S. society, dividing increasingly into hostile camps based on gender, race, and ethnicity, shows little interest in these vital but unexciting arts. A first step, in Johnson's view, should be for Americans to go back to Civics 101—to recall the founding fathers' intentions. Our political system demands consen- sus. When too many people oppose what many others favor, it is designed to block action—to impose gridlock—until an agreement is patched together.

Patching together is preeminently the task of the President—especially one who proposes sweeping changes that up- set cozy arrangements—and to his cred- it, Clinton insists he is ready for compro- mise. But he faces two tough problems. One, in Johnson's words, is "the inability of political Washington to break the fi- nancial hold of lobbyists and political ac- tion groups." Campaign reform is essen- tial. But only Congress can enact such reform, and since 96% of its members are regularly reelected under the status quo, why should they want to?

Then, alas, comes the press. Johnson, a *Washington Week in Review* panelist, gives his fellow TV pun- dits plenty of lumps. The electronic media revolu- tion, in his view, "height- ens and quickens all con- flicts and offers symbols over substance." It's not just commentators who were writing off Clinton's Presidency days after his inauguration. The problem runs deeper than one Ad- ministration's fate. Impor- tant segments of the press—especially but not solely TV—feed popular demands for quick fixes. Incessant, off-the-cuff pun- dity drowns out serious reporting and trivializes politics as a clash of per- sonalities with a constantly changing scoreboard of winners and losers. Why should a politician strive for consensus when the reward is to turn up on the nightly news as a wimp?

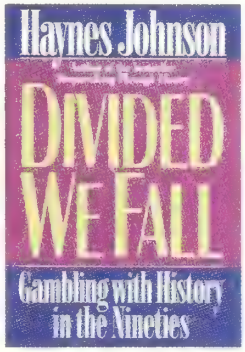
After so much viewing with alarm, the author strives to be upbeat: People are changing, Johnson finds. They're thinking beyond tomorrow and are more ready to face strong challenges. How- ever, this tone fades quickly. Pondering the warning of President John Adams that democracies tend to self-destruct, Johnson concludes somberly: "American democracy was always only an experi- ment. No one ever guaranteed its ulti- mate success."

And that's the news from Washing- ton. Now, here's Geraldo.

BY JACK PATTERSON

Patterson retired as BUSINESS WEEK's editorial-page editor.

Why should a politician work for compromise only to be portrayed on the TV news as a wimp?



LABOR AND MANAGEMENT—WILL THEY EVER WISE UP?

BY ROBERT KUTTNER

A Presidential commission intends to recommend new forms of collaboration between unions and business—but they may not listen

Bill Clinton's 10-member Commission for the Future of Labor Management Relations, chaired by former Labor Secretary John T. Dunlop, will soon tender its findings. The report comes at a time when unionization in the private sector is at a 60-year low but many unions are showing new signs of life.

When the commission was appointed a year ago, Dunlop, the dean of America's mediators and industrial-relations scholars, hoped to broker one last grand bargain to cap a remarkable career. Management would finally honor the 1935 National Labor Relations Act (the Wagner Act), which guarantees the right to bargain collectively. Labor, in turn, would become less adversarial and more collaborative. A dramatically revised Wagner Act would also give official blessing to new forms of representation, such as works councils and employee involvement plans that currently risk breaching the act's ban on company unions.

NO BITE. This bargain, however, was pronounced DOA by most business groups even before the commission met. The Dunlop Commission was widely dismissed among America's biggest corporations as Clinton's bone to AFL-CIO President Lane Kirkland. Most CEOs do not seek a more collaborative form of unionism. They seek a union-free environment and play hardball to get it.

The commission's May report will confirm what is already well documented in the National Labor Relations Board's own files. Managers can resist unions by firing pro-union workers or conducting illegal anti-union campaigns with near impunity. In 1978, labor's first push to toughen the Wagner Act lost by two votes in the Senate. Twelve years of pro-business appointees to the NLRB during the Reagan-Bush era only intensified the pattern.

Faced with a busy congressional calendar and uncertain support by the White House, Dunlop made a tactical decision to issue findings now and recommendations after November. The commission hopes to use the intervening months to invite business leaders to propose remedies and to build political support for its grand bargain.

In the meantime, the nearly moribund labor movement has begun stepping up organizing. Labor is also showing new flexibility in the bargains it will make with employers as diverse as Saturn, Xerox, and Harvard University. In 1990, the AFL-CIO began assessing member unions to underwrite a new Organizing Institute. The institute, with a $2 million annual budget, has already graduated some 270 trainees, each assigned a more senior mentor. Union locals are hiring organizers in increasing numbers, and there is a waiting l to hire the institute's graduates.

In a deregulated economy, many compani can outsource or relocate as strategies union-avoidance. But others, by their natu must be close to the customer. Thus, nursi homes, hospitals, hotels, restaurants, cab companies, janitorial services, universities none of which can move to Mexico—are pri organizing targets.

The Communications Workers of Ameri (CWA), long sheltered by the old, regulated B System, is targeting workers at nonuni Sprint Corp. and at several cable companie Deregulation sends the CWA a clear messag Organize or die. When $15-an-hour unioniz telephone company linemen park their truc next to those of $8-an-hour workers doing si ilar work for nonunion cable companies, a co mon thought occurs. Either the wages of bo must drop to those paid by the cable operat or they must rise to phone-company levels.

The Amalgamated Clothing & Textile Wo ers last September won an election by 2 to at a new Kmart distribution center in Greer boro, N. C. ACTWU organizers were surprised find that a large percentage of the 450 wo ers, earning $6.75 to $8.50 an hour, had colle degrees. The old theory was that college gra disdained unions. In the new economy, where degree is no longer a guarantee of either go pay or job security, unions have more appe

OLD PANGS. The public sector is 40% unioniz Private-sector unionization rates would like rise if management were denied bare-knuck tactics. The Dunlop Commission is apt to re ommend some 1978-style reforms, promising more level playing field, coupled with chang in the law to facilitate kinder, gentler forms labor-management collaboration, some of wh might not involve unions at all.

The promise of a new brand of worker re resentation will test the maturity of busine and labor alike. Many CEOs are wary of forms that let unions in, even ones that offe more productive relationship with labor. So unions don't want to give up the old adv sarial model or their monopoly on employ "voice." And it remains to be seen wheth Clinton will make labor law reform a top p ority. But as Martin Manley, Assistant La Secretary for workplace innovation, observ the two reforms go together. "If it takes act of industrial combat to organize a uni business is going to get combative union he asserts. "If the law can encourage mo flexible forms of representation, that promis a much richer collaboration."

ROBERT KUTTNER IS CO-EDITOR OF THE AMERICAN PROSPECT AND AUTHOR OF THE END OF LAISSEZ-FAIRE

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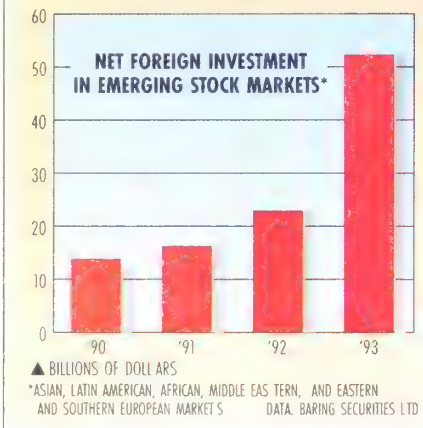
BY GENE KORETZ

THOSE EMERGING MARKETS WILL KEEP ON EMERGING...

Everyone knows that stock markets in developing nations were white-hot last year, but the question now plaguing investors—in light of recent sharp declines—is whether their appeal will wane. The answer suggested by a new study of global equity flows by economists Michael J. Howell and Angela Cozzini of Baring Securities Ltd. is no. "We can expect cyclical corrections in emerging-market stocks," says Cozzini, "but the long-term direction is up."

The Baring study underscores the huge appetite of investors for global investing. Roughly one out of four equity trades conducted worldwide today involves either a foreign share or a foreign buyer or seller. And the flow of fresh equity money across borders (not counting direct investment) soared from $42 billion in 1986 to new peaks of $101 billion in 1991 and $159 billion in 1993.

OH, WHAT A RIDE IT HAS BEEN



To be sure, investment in developed nations dominates the picture. But the most impressive growth was registered in Latin America and the Pacific Rim. Net new equity money flowing in from abroad has exploded—from $3.5 billion in 1988 to $52 billion in 1993—as much as last year's long-term borrowing and foreign direct investment combined.

While the U.S. was the largest net investor in emerging markets last year—providing some $20 billion—Britain and Japan were also big players, ponying up about $9.5 billion and $6.8 billion, respectively, reports Baring. Continental Europe chipped in only $3 billion or so.

But the biggest surprise is the growing investment power of emerging nations themselves. In 1992, they put a mere $2.6 billion in other nations' stock markets. Last year, their outflow surged to $21.5 billion, more than the total foreign-equity investments of either Continental Europe or Japan. And some 40% of that outflow reflected cross-border transactions among emerging stock markets themselves.

All this suggests the appeal of emerging markets will persist in spite of short-run volatility. Over the next decade, notes Cozzini, economies of newly industrialized and developing nations are likely to grow twice as fast as those of the developed world.

"The risks may be higher," she says, "but so are the potential returns. Investors are not going to lose interest."

...AND VIETNAM IS MAKING PLANS TO JOIN THE PARTY

Vietnam doesn't have a stock market, though it has plans for one. Still, the nation is showing the rapid economic progress that drew global attention to its Pacific Rim neighbors.

In the late 1980s, notes economist Ellen T. Rogers of Morgan Guaranty Trust Co., Vietnam was plagued by high inflation, a plummeting currency, and centralized economic controls. But widespread economic reforms and incentives to attract foreign investment have turned the situation around.

Strict adherence to monetary restraint, for example, has helped arrest the decline in Vietnam's currency, the dong, and slashed inflation—from nearly 400% in 1988 to just 5.2% last year. Privatizing agriculture and lifting the price controls have enabled the nation to become self-sufficient in food—and the world's third-largest rice exporter. Meanwhile, surging foreign investment has helped it to begin exporting oil and to build a thriving light-manufacturing sector in the south.

The upshot is that Vietnam's growth hit 8% in both 1992 and 1993, while its trade deficit fell from $1.7 billion in 1988 to just $400 million last year. With abundant natural resources, such as oil, bauxite, and coal, and with a huge pool of cheap labor (unemployment is 20%) in a region where other nations' wages are rising fast, "Vietnam is set for rapid economic progress and rising foreign investment," says Rogers. And friendlier relations with the U.S. can only accelerate the process.

AMERICA'S JOB COUNTS COULD GET SOME SERIOUS REJIGGERING

Employment growth is looking stron er and stronger. David Hensley Salomon Brothers Inc. says the Lab Dept. will raise by 250,000 the tot number of jobs created between Marc 1992, and March, 1993, when it releas new benchmark revisions in June. the agency concludes that job grow in the following 12 months was similar undercounted," says Hensley, "the c mulative upward revision through Mar of this year will be at least 500,000."

Labor also released higher estimat for states and cities last year. Gains the Rocky Mountain and South Atlant states were raised to a heady 4.5% a 3.3%, respectively. And the Northeast increase was lifted from 0.1% to 1.1 with New England up 1.6%. Indeed, A bany and Boston are now outstrippi Chicago, Houston, and Seattle.

Such revisions suggest income grow last year may be revised upwards (a the savings rate downwards), since t government uses employment data calculate personal income.

HALLELUJAH! UNCLE SAM MAY PAY OFF A DROP OF THE NATIONAL DEBT

Get set for a sharp downshift in t government's borrowing behavi between now and the end of Septe ber. Economist William V. Sullivan Jr. Dean Witter Reynolds notes that t Treasury's cash balance at the end March came in nearly $25 billion mo than the agency had projected.

With so much cash in hand and wi higher revenues anticipated from la year's hike in income-tax rates, Sulliv figures the government will be able make "an unprecedented paydown debt" in the current quarter and w need to borrow only $40 billion in t credit markets next quarter. By co trast, over the same two quarters the past four years, the Treasury nev borrowed less than $97 billion.

Sullivan attributes this developme to surging revenues (due to a buoya economy and higher tax rates) combin with a sharp spending slowdown. T dramatic drop in borrowing needs, adds, should help moderate any upwa pressure on short-term interest rat emanating from the private sector.

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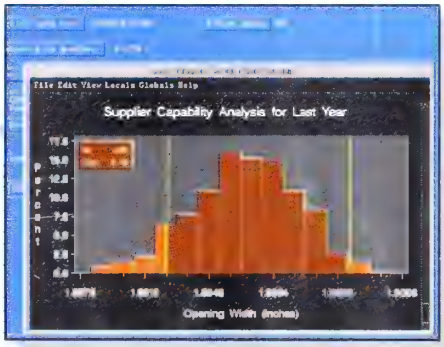

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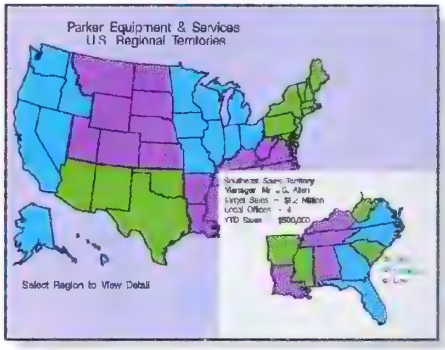

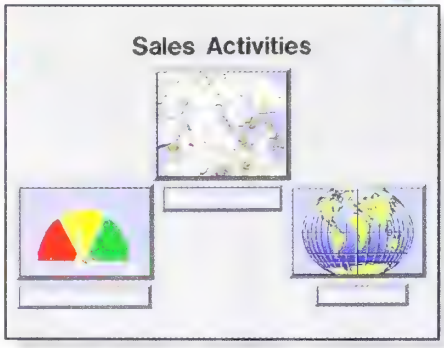

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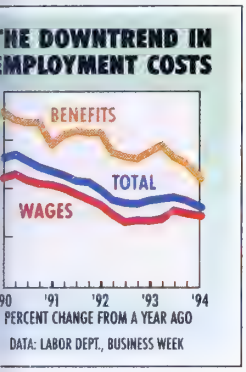
AY 9, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

WAGE HIKES WON'T WAKE THE INFLATION BEAST JUST YET

If you're looking for proof positive that America's inflation dragon is either dead or about to breathe fire, you're not going to find it. However, if you want me comforting data to soothe your worries, take a good ok at labor costs. What do they reveal? The beast is still eathing—but its eyes are closed, and there's not a trace smoke about the nostrils.



Now as never before, labor costs are the key to inflation in this economic expansion. To be sure, such factors as money and credit, industrial operating rates, unemployment, and the overall gap between what the economy is producing and its maximum capability are determinants as well. But what makes this expansion different is the relentless downward pressure on la-

r costs coming from corporate restructuring, overseas mpetition, and efforts to boost productivity.

Driving that point home yet again, the Labor Dept. re-rted that its employment cost index, which measures iat businesses shell out for wages, salaries, and benefits all civilian workers, rose only 0.7% during the first arter, down from 0.8% in the two previous quarters and m 0.9% in the two quarters before that.

The deceleration has been going on for four years now. ice reaching a peak growth rate of 5.4% in the second arter of 1990, the annual pace of overall compensation ts has slowed to 3.2% in the year ended last quarter art). That was the slowest annual growth in seven ars.

BENEFIT COSTS HAVE SLOWED SHARPLY

The slowdown in labor costs seems to be telling us that there is considerably more slack in the labor markets right now than the recent decline in the unemployment e, to 6.5% in March, implies. If so, the economy may be ong way from the point where upward pressure on ges begins to drive price hikes.

Most of the downward push on labor costs has been on ges and salaries, which account for about three-fourths otal compensation. That was true last quarter as well, pay rose 0.7% for the quarter and 2.9% for the year. spite the economy's better tone, that pace was slower n in each of the two previous quarters.

n particular, the stronger economy has hardly enhanced unions' bargaining power. Major collective-bargaining agreements settled in private industry in the first quarter lifted wages by an average of 2.5% per year over the life of the contract, says the Labor Dept. The last time the same parties sat down to negotiate, they agreed to yearly pay increases averaging 3.6%.

But it's not just slower wage growth. Benefits, although they still are growing faster than wages, have slowed even more sharply. During the past year, the average cost of benefit packages rose 4.1%; but four years ago, they were increasing at a 7.1% annual pace. Credit the slowdown in medical-care inflation, which has tracked the moderation in benefits growth step-for-step since they both peaked in 1990.

The continuing slowdown in the growth of health- and workers' compensation-insurance costs accounted for much of the first-quarter slowing in benefits, in addition to smaller increases in the cost of paid leave and unemployment benefits. Slower growth in these expenses more than offset the speedup in bonus payments and contributions into pension funds.

BUSINESSES CAN MEET COMPETING GOALS

The slowdown in employment costs, however, has a seemingly paradoxical sidelight. Yes, wages are slowing down, but real wages—adjusted for inflation—actually are picking up.

Measured by the employment cost index for wages and salaries and adjusted with the consumer price index, real earnings are up 0.4% during the past year (chart). Of course, that's not much, but real wages now have risen above their year-ago level for the third consecutive quarter, something that hasn't happened in seven years.

The reason that this is not at all paradoxical is better productivity growth, which allows businesses to accomplish two competing goals: reward their employees with pay hikes that will surpass inflation and simultaneously enhance their profitability.

The recent pickup in productivity growth, combined with the slowdown in employment costs, means that unit labor costs are growing at the slowest pace in years. These unit costs are central to the inflation outlook, be-

ERIC HOFFMANN/BW

cause their ups and downs explain about 75% of the pattern in inflation during the postwar period. Other business costs, such as materials and overhead, are far less influential.

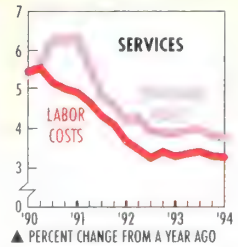
By this yardstick, it's difficult to see any nascent pressures on the prices of goods. Employment costs in manufacturing last quarter were up 3.3% from a year ago. But because factory productivity is rising about 5%, unit labor costs are falling like a stone.

Although the amount of idle production capacity at U. S. factories continues to diminish, that's not automatically a signal of pressure on goods prices. Operating rates in Japan, Germany, France, Canada, and Italy averaged less than 80% last quarter, and new capacity is constantly coming on stream in Latin America and East Asia.

KEEP A WARY EYE ON SERVICES

In this expansion, the place to look first for signs that inflation is starting to pick up is not manufacturing. It's the service sector. Why? Because service pricing is less influenced by the two factors that set this business upturn apart from those in the past: unrelenting foreign competition and better productivity growth.

WHERE INFLATION MAY PICK UP FIRST



▲ PERCENT CHANGE FROM A YEAR AGO

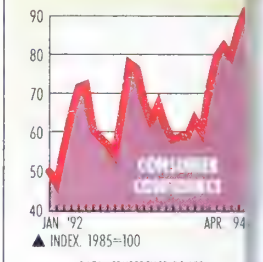
DATA: LABOR DEPT., BUSINESS WEEK

That's why the recent upturn in the growth rate of wages and salaries in services bears watching. Service-sector pay rose 3% for the year ended last quarter. That's about the same annual clip as in the two previous quarters, but the pace has picked up steadily since mid-1992, when wages were growing only 2.4%.

Since 1990, service prices have been rising faster than overall service labor costs (chart), suggesting that, compared with manufacturers, service producers have less incentive to hold the line on their costs. Moreover, productivity gains in services, while improving, are far from stell[ar], placing much more pressure on service unit labor cos[ts] than on unit costs in manufacturing.

Real wages in services are rising at about the sam[e] pace as they are in manufacturing, but economic theo[ry] tells us that productivity must grow at least as fast as re[al] wages in order for companies to maintain their prof[it] margins. That means there still is room for U. S. re[al] wages to grow before margins start to get squeezed. B[ut] because service-sector productivity is a laggard, co[m]pared with factory efficiency, service producers will fe[el] the profit pinch before manufacturers do.

OPTIMISM HITS A FOUR-YEAR HIGH



▲ INDEX, 1985=100

DATA: CONFERENCE BOARD

For now, there's no doubt that consumers are feeling better about their prospects for jobs and earnings. The Conference Board's index of consumer confidence jumped 5 points in April, to 91.7. The index is at its highest point since July, 1990, when the last recession began to take hold (chart).

The brighter spirits came despite the massive sell-off in the stock and bond markets. That's probably because a risi[ng] percentage of consumers think the labor markets have i[m]proved. Job prospects and pay raises probably wei[gh] more on consumer confidence than do monetary policy [or] stock prices. That's why home buying continued to hold [up] in March, as sales of existing homes rose 5.7%, to an a[n]nual rate of 4.06 million.

At some point, of course, the economic expansion is lik[e]ly to bump up against the constraints of available lab[or] and capacity. That's when price pressures will begin [to] grow more noticeably. But with labor costs so tame, a[nd] with the Federal Reserve already on the hunt for the [in]flation demon, that still seems at least a year away. Un[til] that time, the monster should continue to snooze away

THE WEEK AHEAD

NAPM SURVEY

Monday, May 2, 10 a.m.
The National Association of Purchasing Management's index of business activity likely rose in April to 57%, from 56.7% in March, say economists surveyed by McGraw-Hill's MMS International.

CONSTRUCTION SPENDING

Monday, May 2, 10 a.m.
Building outlays probably rose 2% in March, after a 1.2% drop in February.

LEADING INDICATORS

Tuesday, May 3, 8:30 a.m.
The index of leading indicators probably increased 0.6% in March, after slipping 0.1% in February. The index had risen for six straight months before February.

FACTORY INVENTORIES

Wednesday, May 4, 10 a.m.
Manufacturing inventories likely grew just 0.2% in March, after rising 0.3% in February. Inventories are at record lows relative to sales, so factories need to restock shelves.

PRODUCTIVITY AND COSTS

Thursday, May 5, 10 a.m.
Output per hour worked in the nonfarm sector probably grew at a 1% annual rate in the first quarter. Although that's down sharply from the fourth quarter's 6% pace, the continued uptrend in productivity is important. U[nit] labor costs, which fell 3.2% in the fou[rth] period, likely rose at a 2% pace in t[he] first quarter.

EMPLOYMENT

Friday, May 6, 8:30 a.m.
The MMS survey forecasts that nonfa[rm] payrolls expanded by 200,000 in Ap[ril] after March's surprising jump of 456,0[00]. Still, the economists expect that the j[ob]less rate remained at 6.5% in April.

INSTALLMENT CREDIT

Friday, May 6
Consumers probably added $4.5 billion [to] their debt loads in March, after borr[ow]ing $3.5 billion in February.

CHASE AFTER CLIENTS NOT OFFICE MACHINES

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FAX IT
COPY IT
SCAN IT

(8.5"h x 17.8"w x 16.9"d)

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MAY 9, 1994

DESPERATE HOURS AT DEC

TWO YEARS AFTER A MANAGEMENT SHAKEUP, IT'S IN EVEN WORSE SHAPE

PALMER: HIS RESTRUCTURING PLAN FLOPPED

DIGITAL'S LONG DECLINE

1987 Digital, the star of New England's Route 128 technology corridor, can barely keep up with orders. To celebrate, it charters the QE 2 (left) for its annual DEC World trade show.

1988 Earnings peak at $1.3 billion. But CEO Ken Olsen hints at first signs of trouble, conceding that DEC is "struggling to get big orders." To stave off rivals, DEC buys 6% of Mips Computer Systems, a microchip designer.

1989 DEC aims at IBM's core busine with the VAX 9000 mainframe, a cos mistake. Projected to reach $3 billio year in sales, the model never cracks $500 million.

1990 DEC introduces an engineerin workstation based on the Mips arch- itecture. The choice of chip proves unpopular with computer buyers.

STOCK PRICE

120
80
40
0
JAN '87
JAN. '88
JAN. '89
JAN. '90

PHOTOGRAPHS BY SETH RESNICK; CHART BY ALBERTO MENA/BW

Digital Equipment Corp. is a company in need of triage. Sales are drying up in its key minicomputer line. A two-year-old restructuring an has failed miserably. Forecasting d production planning systems have oken down. Cost-cutting hasn't come se to restoring profitability. Top exec-ives—including a handful of outsiders cruited for a turnaround—are bolting. nd the long-term strategy to rebuild e of America's premier technology mpanies around a hot new chip just 't paying off.

The crisis came to a boil on Apr. 15, nen DEC reported a stunning $183 mil-n third-quarter loss—nearly three nes what the most pessimistic Wall reet analyst had predicted. DEC's ock, which traded as high as 48¼ just st May, crashed to 18¼—less than a nth of its all-time high of 199 in 1987 art). During a tense board meeting on or. 21, sales chief Edward E. Lucente as forced out, according to his staffers. siders say Chief Executive Robert B. lmer, who was named to head the C turnaround following the ouster of nder Kenneth H. Olsen in July, 1992, fered to resign, too. A company okesman denies that account, but oth-executives say Palmer's job is decid-ly at risk.

Nearly two years after Palmer took arge, DEC is, if anything, in worse ape. The company is certain to report operating loss for the year ending July 2—its fourth annual loss in a row. Debt, once religiously avoided, is rising, while revenues are expected to fall 7% this year as the company continues to lose market share. Its $1.3 billion cash cushion could be wiped out by restructuring charges that analysts say may reach $1 billion in the current quarter. After two downgrades in the past 11 weeks, DEC's unsecured debt is rated one step above junk-bond status. To bolster working capital, the company set out in March to raise $500 million with a preferred-stock issue, but it could find buyers for only $400 million.

But the real misfortune may be DEC's lost opportunities. It has squandered two years trying halfway measures to respond to the low-margin personal computers and workstations that have transformed the computer industry. Its only significant answer so far—a new line of computers based on its proprietary Alpha chip—came well after rivals unveiled their own products and was poorly marketed. "DEC bet the company on Alpha, and I believe it lost," says C. Gordon Bell, former head of Digital's engineering. DEC itself declined to make top executives available for interviews, but a spokesman insists Alpha "is, in fact, succeeding."

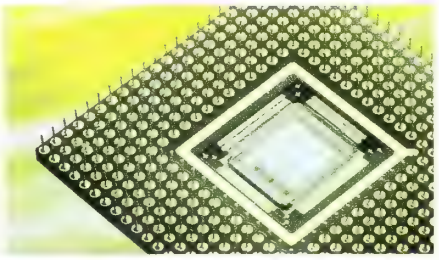
The upshot: DEC remains far behind such rivals as IBM, which is promising a profitable 1994. It also faces the prospect of ever-more-painful cutbacks. The company acknowledges it must address lagging productivity. Now, just to match IBM in revenues per employee, DEC would have to ax 40,000 of its 92,000 workers.

Can DEC be fixed? Maybe—but not without heroic measures. Dozens of interviews with current and former executives, management consultants, customers, competitors, and Wall Street analysts suggest that by radically refocusing on fewer businesses, the company can once again prosper. The best bet, these experts say, is for the company to focus intensely on select markets such as manufacturing, where it always has been strong and retains a solid base of customers, and give up on markets where it remains weak. On the technical side, they say, DEC should stress its skill building complex corporate computer networks (table, page 28).

STRAINED CREDIBILITY. To cut costs, the experts say, DEC needs to severely slash the size of its own sales force and funnel more computers through independent dealers. And the company may have to rethink what it can and can't afford to do. Making its own Alpha microchips, for instance, may no longer make sense. The work could be farmed out, and the hundreds of millions of dollars saved could be put to better use.

It's not clear that Palmer is ready to go that far. In the wake of the earnings fiasco, Wall Street has pressed for cuts of at least 20,000 employees—but so far, Palmer has hedged. In an Apr. 25 letter to shareholders outlining a new two-year turnaround plan, he pledged a

91 DEC spends $483.5 million to
ıy minicomputer operations from
annesmann and from Philips. First
nual loss: $617 million.



1992 Digital bets its future on the Alpha chip (above), which it says will be at the core of its computer line, and starts work on a $425 million chip factory.

1992 DEC's board ousts Olsen (left) after a staggering $2.8 billion loss. Robert Palmer takes over.

1993 Palmer begins a reorganization around nine new business units. "We are on track," he says. IBM veteran Ed Lucente (below) is hired to head sales and marketing.

1994 DEC's restructuring is abandoned as losses continue. Lucente and two other key executives resign. Is Palmer next?

DATA BRIDGE INFORMATION SYSTEMS INC.

JAN. '91 | JAN. '92 | JAN. '93 | JAN. '94 APR. 26

restructuring that focuses on markets "where we know Digital can prosper." But he also warned that moving too quickly "could truly jeopardize our viability."

Moving too slowly, however, could destroy Palmer's already strained credibility. The goal for his proposed restructuring is to slash the combined costs of sales and research and development to 30% of revenues from 39%. But with price pressures driving DEC's gross margins to around 33%, that means "an operating margin of 3% in a good year," notes Morgan Stanley & Co. analyst Steven M. Milunovich. That's not enough for some long-term investors who now have bailed out. Wall Street sources say Sanford C. Bernstein & Co. sold all of its 6 million shares this year. Officials at Bernstein declined to comment. The University of California, meanwhile, confirms that it sold 1.5 million shares held since the 1970s.

BLUEPRINT. Confidence in Palmer within the company may be vanishing, too. Board members who only recently voiced support for Palmer are now mum. Before the Apr. 21 board meeting, Director Robert R. Everett, ex-president of MITRE Corp., for one, said Palmer "still has the board's confidence." Now, he replies "no comment" to that question.

The first step toward restoring credibility would be shoring up DEC's financial management. "They need someone with turnaround experience who can tell a credible story on what the numbers look like," says Philip Anderson, a professor at Dartmouth College's Amos Tuck School of Business Administration. Anderson says the first thing Louis V. Gerstner Jr. did as CEO of IBM was to hire his own chief financial officer.

The next move: better systems. Insiders say one of the reasons Palmer's reorganization—built around customer-oriented business units—failed was inadequate sales-forecasting and manufacturing-planning systems. Designed for low-volume, high-margin products, they could not cope with the rapid shift to commodity products such as PCs and disk drives. One DEC sales manager says the sales-forecasting systems have no link to DEC's manufacturing-planning systems—so the two are manually reconciled. Indeed, Lucente predicted as recently as February that Alpha sales were going to double in the March quarter. Instead, Alpha sales rose 66%. Admits a spokesman: "There's some internal work that needs to be done for us to become more predictable."

Once he has a handle on finances, Palmer has a blueprint handy for the company's restructuring. Employees say a strategy group has been working on various scenarios including those that would shrink the company to a profitable $10 billion level—more than 25% below its $14.3 billion in 1993 sales. Indeed, whole businesses and product lines could be readily sold. Last year, DEC considered—but rejected—offers for its disk-drive business, according to David C. Moschella, an analyst at International Data Corp. Its database software also is attracting suitors.

Eliminating lagging businesses would send a message that DEC can identify and focus on its strengths in such areas as networks. "It's much better to focus in areas where there's a clear advantage," says Rosabeth Moss Kanter, a Harvard business school professor. Minor computer markets, such as food retailing and transportation where DEC has few software relationships, should go—no quibbling.

Downsizing is an idea that was floated at DEC as long ago as 1991, after Olsen commissioned an internal evaluation of its businesses. The losses were just starting, and consultants recommended a strict focus on big systems, networking, and software used by programmers. At the time, DEC had about 118,000 staffers. "We said Digital only needs 75,000 people if it outsources all the commodity products and focuses on big, networked systems sales," says Darrell Griffin, who conducted the evaluation for Olsen and is now president at software developer Whole Systems International.

Instead of focusing on core businesses and ditching others, though, DEC h expanded into new markets while ni bling at budgets. Not only did th undermine the turnaround but it al may have been a pointless effort: Cu tomers no longer expect computer ma ers to supply everything from PCs a disk drives to sophisticated networks mainframes. Rather, they find DE soup-to-nuts approach confusing. "I not sure if they're trying to be a wor station company or an also-ran mai frame company—or both," observes Ge Crombez, a computer buyer for Chrysl Corp.'s Technical Computer Cent Chrysler bypassed Alpha last year wh it upgraded its VAX computers.

It's shocking to DEC's engineerin driven culture, but buyers may not re ly care what technology the compa sells. Influential customers such as Fo Motor Co. say DEC's big systems kno how is more important than any part ular product. "We use Digital because has built up a detailed knowledge of business," says David Essig, a Ford M tor information-systems developme manager. "It doesn't have a lot to with a 32- or 64-bit chip engine."

The most radical prescription Palmer: Throw the low-margin PC bu ness into a joint venture with anoth company. DEC, which holds a 9% stake Italian computer maker Olivetti, co place its PC business in a joint ventu with Olivetti and together gain eco mies of scale. Part of the reason for cente's departure was a rift over sa overhead. He and PC Vice-President

HOW TO FIX DEC

Digital Equipment is among the most troubled of the old-line computer companies. What should be done? Here is a distillation of the most promising ideas from current and former DEC executives, computer experts, and others:

FOCUS ON STRENGTHS in computers, networking, and software-development tools—areas where DEC products remain superior. Invest in high-growth and profitable operations such as networking gear and workstations.

SELL BUSINESSES such as database software, applications software, and printers where there is no leadership position. Consider closing or selling unprofitable systems integration business.

DEVELOP A CLEAR BUSINESS STRATEGY—not a technology plan—that customers and employees can understand. Then, communicate the strategy clearly.

SLASH 40,000 POSITIONS to get costs in line with industry profit levels, including one-third of the 6,000-person sales force. Assign remaining sales reps to top 50 customers in key markets. Use dealers for the rest.

SELL THE ALPHA CHIP PLANTS to a chipmaking company such as Advanced Micro Devices.

:o Pesatori—who replaced Lucente—d heated arguments over Lucente's sistence that the PC business was not ying its share of sales overhead, ac-rding to a sales executive. "It became vious one of them had to go."

DEC employees are bracing for drastic ves. "I've heard outright that soft-are products are being disposed of," ys one marketing staffer. Insiders say e company also is drawing up plans to op a third out of the costly and unpro-ctive 6,000-member sales force. The an? Restrict direct sales to a core oup of industries such as banking, anufacturing, and aerospace. Some em-oyees, however, fear a discarding of ucial businesses. The big fear is "we ll be another PanAm—they sell the able assets, and nobody knows what do with the remaining pieces," says a ngtime marketing manager.

AINFUL TRANSITIONS." The road back ll be treacherous. But other compa-es have bounced back from worse sit-tions. Take Chrysler. In the early 70s, it faced bankruptcy. The seeds of day's record profits came from Lee Iacocca's gamble on minivans. Al-ough never in such dire straits, com-ter maker Hewlett-Packard Co. took a nilar tack with laser printers, which ve now become a $4.8 billion busi-ss. "It's not at all the case that you fix ur act by taking what's wrong and aking it right," says professor Ander-n. "There typically is an unexpected me run that tides you over while you dergo these painful transitions."

Is there a homer in DEC's future? One ssibility is the nascent market for deo servers," computers that store d transmit digitized images. While the rket is now very small, some ana-ts expect it to reach $3 billion by the d of the decade. What's more, the siness may be perfectly suited to C's skills in stringing together com-x, large-scale networks. Digital is al-dy selling such products to U S West, nex, Ameritech, and Canadian tele-one-company consortium Stentor, all of ich are using the machines in video-demand trials.

Until DEC replaces old ways of think-, though, growing and profitable busi-ses such as networking will remain ght up by indecision and chaos. One eswoman shocked a March sales meet-when she challenged Lucente on y the sales force should bother calling their accounts. Customer assignments the next fiscal year, she pointed out, l weren't resolved—a victim of DEC's tinuing shakeup. Why sell when you 't know who your customer is? It's a stion that continues to vex Palmer his shrinking computer giant.

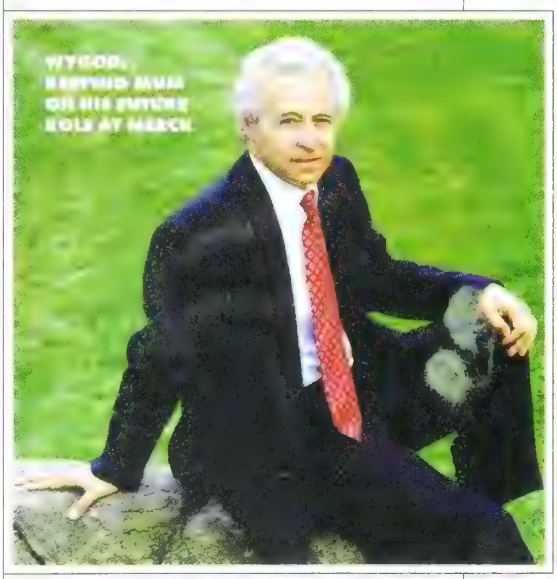
By Gary McWilliams in Boston

THE MERCK MARATHON: BACK TO THE STARTING LINE

With Wygod out of the running, the search for a CEO resumes

For a well-oiled machine such as Merck & Co., it was hardly the kind of annual meeting investors have come to expect. Almost as an afterthought in the question-and-answer period following his formal presentation, Merck Chief Executive P. Roy Vagelos shocked the assembly with a terse announcement: Martin J. Wygod, who looked to be the top candidate to succeed Vagelos as CEO when he retires on Nov. 1, would not be a contender for the top job.

The Apr. 26 announcement is a major embarrassment for the $10.5 billion company. Only last January, Vagelos seemed to regard Wygod as his heir, giving over responsibility for two-thirds of the company's sales to the founder of Medco, the drug marketing powerhouse that Merck acquired last year. That move came after another apparent successor, Merck insider Richard J. Markham, quit abruptly and with no explanation last summer. Markham's departure caused internal turmoil because Vagelos had bypassed executives senior to Markham to anoint the young maverick as his successor. Markham has since become CEO of drugmaker Marion Merrill Dow Jones.



SKEPTICS. What happened this time around? Wygod, who didn't take the dais with Vagelos at the annual meeting, says he had told Merck's board in March that he would bow out. But analysts believe the board has been skeptical of Wygod—seeing him as a seat-of-the-pants entrepreneur who lacks the breadth of experience to run a huge company like Merck—and may have told him recently that he would never get Vagelos' job.

Vagelos, looking weary, tried to put up a brave front. "I still have six months," he says, noting that a board search for his successor is "well along." He and Wygod declined further comment, even on what, if any, role Wygod will play at the company. The 54-year-old Wygod, who is the company's largest single shareholder, with 1.8 million of its 1.2 billion shares, refuses to say even if he plans to quit the board seat he just won.

Outsiders are busy handicapping other candidates for the job. The top pick among insiders is Edward M. Scolnick. As head of Merck research, Scolnick, 53, is a protégé of former research head Vagelos. "It would be difficult to find anybody better, inside or outside," says Virgil Baldi, a Korn/Ferry International headhunter who has worked for Merck.

TICKTOCK. The biggest problem with Scolnick: a lack of marketing expertise. Another candidate, Executive Vice-President Jerry T. Jackson, has deep sales experience, although he lost control of U. S. sales when Wygod was elevated in January. Other inside candidates include Executive Vice-President Francis H. Spiegel Jr. and Chief Financial Officer Judy C. Lewent, though neither has much nonadministrative experience.

Few observers expect Merck to look outside. Bringing in an outsider when the company still must prove that its $6.6 billion purchase of Medco makes sense would be too disruptive, analysts say. "Merck is famous for growing its own" management, says analyst Neil Sweig of Ladenburg, Thalmann & Co. Any insider, however, would get the job as an acknowledged third choice.

Still, Vagelos suggested a decision could come soon. He knows he can't let the uncertainty linger. As Washington fiddles with health-care reform, Merck can ill afford to remain undecided about who will be its next leader.

By Joseph Weber in North Branch, N.J.

DRUGS

ZANTAC PRODUCTION AT GLAXO: NOW, CIBA WANTS TO MAKE A GENERIC VERSION

HAVING AN ULCER IS GETTING A LOT CHEAPER

Drugmakers battle over prices, but for consumers that spells relief

It's shaping up to be the biggest, costliest scramble for market share in drug industry history. On May 17, SmithKline Beecham PLC's anti-ulcer blockbuster, Tagamet, will lose patent protection in the U. S., unleashing a flood of cheaper generics onto the American market. And there's more competition on the way. Bring on the Maalox: The ulcer wars look like they'll be bruising.

Already, SmithKline is offering price cuts of up to 80% to protect Tagamet's $1 billion in sales, two-thirds in the U. S., from 10 generic rivals expected to enter the fray. Market leader Glaxo Holdings PLC, meanwhile, is trying to fight off Ciba-Geigy Ltd. and others, which have attacked Glaxo's patents on Zantac—the world's biggest-selling drug. And studies linking ulcers to a bacterium called *H. pylori* are boosting sales of a new generation of anti-ulcer treatments led by Astra's Prilosec.

DEEP CUTS. It all adds up to a fundamental shift in the $8.4 billion global anti-ulcer market. Sales of Zantac and Tagamet, so-called H_2-antagonists that help heal ulcers by blocking gastric acid production, have exploded since Tagamet's introduction in 1976, producing huge profits for Glaxo and SmithKline—in part, because traditional treatment requires lifelong use of the drugs.

The new competition will cut deeply into those earnings, but it should prove a windfall for customers. "We're very excited about Tagamet going off patent," exults Dr. William T. Elliott, head of a drug committee at Kaiser Permanente, the big managed-care group. No wonder. SmithKline's price-cutting on Tagamet could reduce Kaiser's drug bill by $10.4 million a year. Kaiser hopes to wrench similar concessions from Glaxo.

Kaiser isn't the only company hoping to take advantage of turmoil in the ulcer market. In a survey last year of 228 big U. S. drug buyers, Goldman, Sachs & Co. found that most plan to reduce their use of Zantac or negotiate larger discounts once generic Tagamet becomes available at less than one-tenth the price. Indeed, Paul Krikler, a Goldman analyst, says Zantac's $2 billion in U. S. sales could drop by 10% a year starting in 1996, when generic competition begins in earnest.

Zantac may be hit harder, though, by Ciba-Geigy's attack. In March, Glaxo announced that Ciba had filed an application with the Food & Drug Administration to produce a generic version of Zantac. Glaxo has maintained that Zantac is protected until 2002 by a 1985 patent specifying a new manufacturing process. Ciba would make its clone using an earlier process whose patent expires next year. Analysts believe Glaxo will sue.

Glaxo, the industry's No. 2 player after Merck & Co., isn't unprepared. Tr... Zantac accounted for 44% of its 19... sales and perhaps more than 60% of profits. But Chief Executive Sir Richard B. Sykes says the company is in discussions to tighten links with U. S. managed-care companies, offering "capitated" packages that will cover customers' drug bills for a set price. Insiders say a deal could be cut by yearend. That will allow Glaxo to bundle its products, softening the impact of generic competition against a single drug.

REBATES, TOO. Glaxo also is working with Warner-Lambert Co. to develop an over-the-counter version of Zantac, aimed at the heartburn market, to boost volume. Similarly, SmithKline plans to push into the nonprescription arena with Tagamet 100, a lower-dose version that has just been launched in Britain. And last fall, in a sharp break with industry tradition, SmithKline began giving $10 rebates to consumers who buy a month's supply of prescription Tagamet for $80. Analysts say the promotion probably has boosted Tagamet sales, but it may help the eventual launch of Tagamet 100.

Meanwhile, buyers say SmithKline is offering its own generic Tagamet. Customers say the generic, now priced 25% below branded Tagamet, will drop to 10¢ a tablet after Tagamet's patent expires, compared with about $1.85 for Zantac. Premier Health Alliance, for example, an Illinois-based cooperative of 222 hospitals and health systems, estimates it will save at least $250,000 a year by buying the generic drug.

In fact, SmithKline appears to be fighting this battle from a position of strength. Although Tagamet's U. S. sales are expected to dive 55% from 1994 to 1996, to $215 million, the company has more than compensated with a spate of new drugs. Sales of such products as Relafen, an anti-inflammatory; Paxil, to treat depression; Kytril, for controlling nausea during chemotherapy; and Havrix, a hepatitis A vaccine, are expected to top $100 million each this year. "We're not a one-product company any more," boasts Jan Leschly, the 55-year-old former tennis champ installed as SmithKline's new CEO on Apr. 25.

But the real winner in the ulcer wars s likely to be Sweden's Astra. Its Prilosec, sold in the U. S. through a joint enture with Merck, is expected to capure nearly one-third of the American narket by 1996, up from 14% last year, hanks to overwhelming evidence that efutes long-trusted research associatng ulcers with stress.

Astra was the first to show that its ulcer drug, known as a proton-pump inhibitor, can be used with an antibiotic to kill *H. pylori*. The combination, recently approved in Britain, is "probably the best treatment" for ulcers, says Dr. Barry J. Marshall, a professor at the University of Virginia. In February, the U. S. National Institutes of Health agreed. Even Prilosec, though, faces competition from a far cheaper combination of two antibiotics and bismuth—the ingredient in Pepto-Bismol—that appears to be equally effective. For Astra, as well as SmithKline and Glaxo, that's more than enough to cause serious heartburn.

By Julia Flynn in London, with Joan O'C. Hamilton in San Francisco, Joseph Weber in Philadelphia, and Susan Chandler in Chicago

RATEGIES

CALL IT BLOCKBUMMER

Vithout a merger, Blockbuster's Viacom stake looks pricey indeed

When do you know a relationship is over? For Viacom Inc. and Blockbuster Entertainnent Corp., one telling moment came t an Apr. 26 board meeting. The $4.7 illion merger of the two companies has een in trouble ever since Viacom preailed in its epic battle for Paramount Communications Inc. But instead of vorking to salvage the deal, Viacom diectors and Blockbuster Chairman H. Vayne Huizenga focused on how best o consolidate Paramount, say sources amiliar with the meeting—with Huizena acting more like an interested inestor than a decisive player.

Indeed, people close to Viacom say Chairman Sumner M. Redstone is aleady planning for life without Blockuster and its rich cash flow. To pay own the heavy debt from Paramount, e may end up selling a few more assets nan he had first planned.

Huizenga, though, could find himself n a quandary of a different sort. "He ut himself up for sale," says John Tiner, a media analyst at Furman Selz nc. "The onus will be on him to prove nat his business is still worth a lot."

OST DREAM? By selling out to Viacom, ay media experts, Huizenga implicitly cknowledged that his core home-video usiness will someday be supplanted by novies on demand. Many observers had raised the merger as the capstone in Huizenga's strategy of diversification—ransforming the Fort Lauderdale (Fla.) ideo giant into a well-rounded media mpire. Now, though, Blockbuster may e left with videos, some other busiesses, and a costly investment in Viaom. "We're doing a lot of good things ven though we're in limbo," says uizenga. "Business is great, but [on iacom] there's nothing to report."

The trouble is, Blockbuster shareolders can't get past the Viacom investment. Huizenga purchased $1.8 billion of Viacom preferred and common stock to help Redstone vanquish QVC Network Inc.'s Barry Diller in the bidding war for Paramount. But Viacom doesn't have to return the money, even if the Blockbuster deal founders. Worse, Viacom's Class B stock has tumbled from $41 to $23 since Huizenga bought in. Because Blockbuster paid $55 per share, the company's loss currently stands at $728 million. "We paid a dear price," concedes one Blockbuster insider, "but it's an investment in a business we like."

Wall Street doesn't share the enthusiasm. Blockbuster shares fell from $30 to $25 after it announced the merger on Jan. 7. And even the widespread belief that the deal is dead—fueled by news that Blockbuster won't put it up for a vote at its May 24 annual meeting—hasn't revived the shares. Instead, stockholders are worried about how much Blockbuster may lose on its Viacom investment.

WILD PITCH? IF HUIZENGA BACKS OUT, VIACOM CAN KEEP THE CASH

According to the merger agreement, Viacom will compensate Blockbuster if the deal is called off and Viacom stock is still trading below $55 a year from now: The company can either pay up to $275 million in cash or securities, or it can sell Paramount's regional theme parks to Blockbuster for $750 million, payable in Viacom shares. The parks would dovetail nicely with Blockbuster's plans to build its own 2,400-acre entertainment and sports complex in south Florida. But Redstone may not want to part with them. Either way, the compensation could fall far short of Blockbuster's investment.

Nor are shareholders likely to be consoled that Blockbuster is pursuing joint ventures with Viacom, such as selling *Nickelodeon* magazine in Blockbuster's stores. "If you want milk, you don't have to buy the cow," says Larry Haverty, vice-president of State Street Research & Management, which owns 2.4 million shares.

EARNINGS UP. Still, as Haverty and others point out, Huizenga is not without options. Technical glitches in Time Warner's Orlando cable network underscore the fact that conventional video rental has more of a future than previously feared. Indeed, Blockbuster's earnings jumped 62% in the first quarter of 1994, to $72.6 million from $44.7 million, on revenues of $696.5 million. What's more, other companies, including Walt Disney Co., have expressed interest in Blockbuster (page 80).

But unless Huizenga pulls off another deal, he'll continue to battle a perception that Blockbuster is locked in a sunset industry. Huizenga has been diversifying steadily—purchasing stakes in a small Hollywood studio and a chain of music stores. And he insists he has 10 years or more to wean Blockbuster off videos. Without a Viacom merger, though, the years may pass more quickly than he thinks.

By Gail DeGeorge in Miami and Mark Landler in New York, with bureau reports

PHOTOGRAPH BY ALLEN EYESTONE THE PALM BEACH POST CHART BY LISA • NOUSE BRAIMAN BW

UTILITIES

SHOCK TREATMENT FOR CALIFORNIA UTILITIES?

The state may deregulate the industry, allowing customers to shop around

The tidal wave of deregulation that has swept through the airline, telecommunications, and natural-gas industries is about to hit yet another vast sector of the U. S. economy: electricity supply. But this latest deregulatory wave is starting in California, not Washington.

On Apr. 20, the California Public Utilities Commission unveiled a sweeping proposal that would radically change the way utilities have been regulated in California—and the rest of the U. S.—since early this century. Starting on Jan. 1, 1996, the state's largest industrial customers would be allowed to shop around for electricity, rather than be required to buy from the local utility. Gradually, smaller companies would be included. By 2002, even residential customers would be free to buy power from competing suppliers—which should drive down their bills over time.

The California proposal has yet to be enacted and could face considerable opposition. But it already has sent shock waves through the staid utility industry. "This is very, very significant," says Charles A. Falcone, a vice-president with American Electric Power Co., a $5.3 billion utility based in Columbus, Ohio. "It's going to put a big thrust behind the concept of retail competition."

EFFICIENCY. Indeed, there's a good chance California's plan will spur other regions into action. More than a dozen states have been studying the concept of retail competition. But most proposals have languished. In early April, Michigan broke new ground when it agreed to a five-year experiment with limited competition in its power market.

Deregulation has been creeping up on the electric industry for years. Low natural-gas prices, combined with the advent of small, efficient gas-turbine generating plants, have made it economical for independent power companies to jump into the market. They have been encouraged to do so by federal legislation that has created a lively wholesale power market. But policymakers have been trying to decide how, or even whether, to proceed with a more radical phase of deregulation known as "retail wheeling." Such a move would end the geographic monopoly enjoyed by local utilities, allowing customers to buy power directly from other utilities or independents. But it would also require resolution of a host of complex issues.

California's regulators are the first to take a stab at offering solutions. "In a world in which there is already competition in generation of electricity, the existing model of command-and-control regulation is no longer feasible," says Daniel W. Fessler, president of California's utilities commission. "We could either react in a thoughtful manner or allow the changes to overtake us." He makes it clear that the proposals are aimed at provoking discussion. "My mind is open to better ideas," he says.

Indeed, the plan leaves most of the crucial details to be worked out. One source of controversy is its proposed solution to one of the thorniest dilemmas of retail competition: Who should pay for already built power plants competitio makes economically untenable or unne essary? Some big industrial users argu that utility shareholders should be stuc with the bill, but the California pla would require customers who sh around for power to pay a still unquant fied transition charge to compensate th utility for uneconomic capacity. Th state's big utilities are greeting the pla with caution. "The devil is in the details worries Pacific Gas & Electric Co. S nior Vice-President Robert D. Glynn J

Still, many big users welcome the Ca ifornia proposal. "We consider this a m jor breakthrough," says Pete Mehra, e ergy-efficiency and supply manager Ford Motor Co. "The utility industr has been keeping its head in the san hoping to ignore competition. At lea the commission in California is startin to face up to the issues."

Environmentalists, however, don't lik the plan—or retail wheeling in gene al—one bit. They have effectively use the regulatory system to goad utilitie into adopting energy-efficiency progran and into buying power from renewab sources. But if retail competition is a lowed, the lowest-priced supplier wou win. Environmentalists say that's shor sighted and ignores the public benefi of lower consumption and diverse supp sources.

Such concerns will make the Californ plan politically dicey for the state legi lators who will have to approve many its details. And the commission's origin timetable, which calls for a final dec sion by August, is likely to slip. Bu California seems set on leading U. S electricity deregulation. And where goes, everyone else is likely to follow.

By Mark Maremont in Bosto

Commentary/by Mike McNamee

WANT HEALTH REFORM? DON'T FORCE BUSINESS TO FOOT THE BILL

When House Energy & Commerce Committee Chairman John D. Dingell (D-Mich.) postponed his panel's Apr. 25 drafting session on health-care reform, the whispering began. Dingell didn't have the votes he needed to pass even a whittled-down version of President Clinton's plan. Capitol Hill gossips muttered that Dingell was thinking about throwing in the towel on health-care reform altogether.

Not likely. Dingell won't surrender until he has browbeaten and arm-twisted every Democrat on his committee. But the rumor embodies a telling message: Even the most powerful barons of Congress can't sell the Clinton health-care plan as it stands—especially its mandate that employers pay for their workers' health insurance. Indeed, small-business opposition to the idea has hardened the resistance of House moderates who hold swing votes on key committees.

For Democratic leaders, clearly, the fight for a mandate will be bloody, and the political price of victory high. If the President and his Hill allies want a bill to take into this fall's elections, they will have to start working on a measure that breaks the logjam by adopting ideas from the political center. That means, first and foremost, abandoning the employer mandate.

LONG MEMORIES." So far, Democrats have simply tried to buy off the opposition. Dingell's latest proposal would insure that companies with fewer than 20 employees pay no more than 2% of payroll for coverage. Ways and Means Committee Chairman Dan Rostenkowski (D-Ill.) is leaning toward letting small companies buy heavily subsidized Medicare coverage for their employees. "The way things are going, small business will get its insurance practically for free," gripes lobbyist Walter B. Maher of Chrysler Corp., a staunch backer of the Clinton plan.

In the Senate, leaders are taking a broader approach. Majority Leader George J. Mitchell (D-Me.), who says he passed on a Supreme Court nomination to work for health reform, proposes slimming down the Clinton plan's rich benefits and cutting the employer-paid share of premiums from 80% to 50%. Mitchell hopes his plan will mobilize big employers enough to counter small-business lobbying.

These bids, however, aren't buying many votes. Small companies fear that once they agree to pay for insurance, Congress will take away the bargain premiums. "Our members have long memories—they remember that Medicare and Medicaid were expected to cost only a few dollars," says U. S. Chamber of Commerce President Richard L. Lesher. In a poll, the Chamber found that 71.2% of members oppose the mandate.

Nor is Big Business impressed. "Every dollar [Dingell] gives to small business means a dollar taken from us," complains Richard I. Smith of the Association of Private Pension & Welfare Plans, a group that lobbies for big companies on benefits issues. Deep discounts for small business would also create enormous incentives for big companies to spin off operations into mini-companies, according to the Congressional Budget Office, jacking up the government's costs by $12 billion a year.

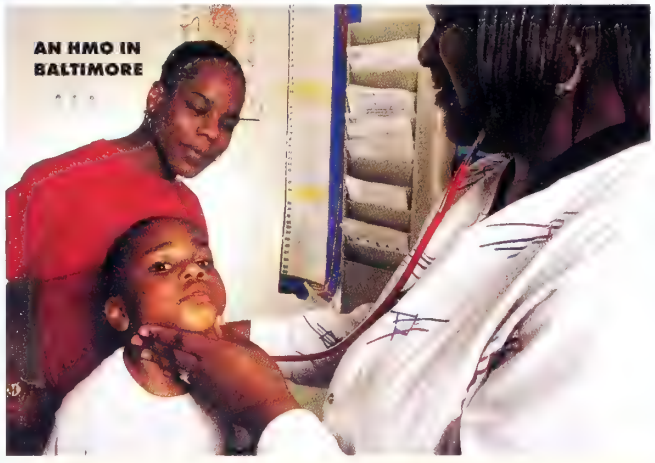
The leadership's tinkering isn't making employer mandates any more attractive politically, either. In the Senate, a health bill can't succeed without Republican support—and the GOP isn't likely to accept any mandate. Nor will Republicans accept the large tax increase Rostenkowski says will be needed to fund a rich, government-dominated health plan. Until they see which direction the Senate takes, House Democrats don't want to put themselves out on a pro-mandate limb, regardless of their leaders' pleas.

MIDDLE LANE. Fortunately, Hill moderates are studying options for gradually moving toward universal coverage without employer mandates. The first step is simple: Health reformers agree that many more Americans will have coverage if Congress outlaws insurance practices that drive away many small employers. The necessary reforms, such as those barring insurers from canceling policies or excluding coverage of preexisting conditions, are accepted by the sponsors of every reform package.

Beyond insurance reform, most lawmakers now agree that small business should be able to pool its health-care purchasing power. Subsidies for the poor also are part of the consensus. To fill any remaining gap, moderates are examining the idea of regional "uncompensated-care funds."

President Clinton is wasting precious time—and political capital—fighting for an employer mandate. The fastest route to health-care reform lies down the middle. Start talking to the moderates now, Mr. President.

McNamee covers health-care policy in BUSINESS WEEK's Washington bureau.



ALON REININGER/CONTACT

EASING THE HEALTH-CARE PAIN

Legislative options for employers' roles in financing health care:

BUY OFF SMALL BUSINESS Clinton's plan would cap its premiums at 3.5% to 7.9% of payroll. Representative John Dingell promises to exempt the smallest outfits.

CUT EVERYONE'S COSTS Senator George Mitchell wants to slash the cost of the President's package by 5% and require business to pay only 50% of the premium.

KILL THE MANDATE Bills from conservative House Democrats will make insurance accessible and more affordable without requiring employers to pay premiums.

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TECHNOLOGY

THINKING FLAT IN WASHINGTON

It's redoubling efforts not to let Japan rule in flat-panel displays

To Washington's competitiveness mavens, flat-panel displays are a key test of America's industrial resolve. The market is huge—$5 billion today, rising to $20 billion by 2000, analysts predict. The thin screens will be used in everything from autos to fighter planes—to say nothing of on "every exit ramp on the Information Highway," declares Peter Mills, president of the U. S. Display Consortium, a group of manufacturers. Yet so far, the U. S. is nowhere: Japan owns 95% of the global market.

On Apr. 28, however, America dramatically expanded its efforts to get back in the picture when the Pentagon and White House announced a nearly $1 billion "national flat panel display initiative." The key element, says a top Pentagon official: "incentives to get to full-scale manufacturing." The new money is on top of more than $200 million the Defense Dept. has spent since 1989 on flat-panel technologies, manufacturing equipment, and a pilot plant at OIS Optical Imaging Systems in Troy, Mich.

How will the initiative work? International trade agreements bar direct subsidies to manufacturing, so the Clintonites came up with an angle play. The Pentagon will pay half the $100 million cost of a larger pilot plant, expected to be built by AT&T and Xerox. Moreover, if industry puts up the $200 million to $400 million needed for a full-scale plant, Uncle Sam will chip in up to $120 million for research and development—provided that figure is matched by the companies involved. Also in the plan: export promotion, more research in federal labs, and subsidies for military purchases of flat screens.

Can the Clintonites pull this off? Foreign governments are sure to challenge the plan, and Republicans will attack it as industrial policy run amok. The Administration's response: The Pentagon can only afford the displays it needs if there's a strong U. S. commercial industry. If the plan boosts competitiveness, so much the better.

By John Carey in Washington

PEOPLE

PETRIE: $5,000 IN GAMBLING GAINS GAVE HIM HIS START

MILTON PETRIE CALLS IT A DAY

In business since '29, the apparel king is finally cashing out

When Robert Olszewski interviewed for a job with Petrie Stores Corp. 17 years ago, he expected to meet a personnel manager of the Secaucus (N. J.)-based women's apparel company. Instead, he was ushered into a spacious office full of memorabilia, teddy bears, and the unmistakable aura of power. It was the office of the founder himself, Milton Petrie, who sat glaring at his applicant from behind a big formica desk. "I was in awe," recalls Olszewski, now senior vice-president. "It was like being escorted to a legend."

Indeed, in the world of retailing, Milton J. Petrie is a venerable figure. The son of Russian immigrants, Petrie launched a hosiery store in Depression-era Cleveland and turned it into an apparel empire that today stretches from New Hampshire to Hawaii. That's why the biz was buzzing on Apr. 21 with news that Petrie Stores was putting its 1,700 stores on the block and distributing to shareholders its $1.3 billion stake in Toys 'R' Us Inc.

Petrie, 91, is cashing out. Poor health has kept him out of the office for the past year. Now, the complex transaction will bring him roughly $700 million for his life's work—while enabling the company he founded six decades ago to skirt approximately $600 million in federal and state capital-gains tax liabilities for shareholders.

Petrie Stores has come a long way since its founder opened Red Rob hosiery store in downtown Cleveland with $5,000 in gambling proceeds. The store went bust after two years. But Petrie, hard-driving and ambitious, repaid his debts and slowly acquired budget-oriented women's apparel retailers. By the 1960s, Petrie Stores, operating under names such as Marianne, Jean Nicole, and Winkelman's, was going head-to-head with department stores.

Crusty and penny-pinching, Petrie eschewed self-indulgence even as the company grew—making do for years on a $150,000 annual salary. Meanwhile, he quietly doled out wealth to charities: The son of a policeman himself, Petrie regularly has given police widows $20,000 annually for the rest of their lives. At the same time, he has run with a powerful bunch, playing bridge at Manhattan's Regency Whist Club with such Petrie directors as Alan "Ace" Greenberg, chairman of Bear Stearns, and Laurence A. Tisch, chairman and CEO of CBS, as well as with Warren E. Buffett, chairman and CEO of Berkshire Hathaway.

TOYS WERE HE. Petrie's smartest business move had little to do with clothes. In 1978, he visited a Toys 'R' Us store and was so impressed he began buying stock in the company, at an average of 57¢ per share. It was a startlingly prescient investment. Petrie kept buying through early 1987, amassing 40.4 million shares—worth 60 times what he paid.

Failing to invest in merchandising and systems technology, meanwhile, his retailing business began to lose ground to such hard-charging specialty shops as The Limited and Gap. "He made a brilliant investment in Toys 'R' Us and mismanaged his core business," says Robert J. Schweich, an analyst with Werthe Schroder & Co. For its fiscal year ended Jan. 29, Petrie Stores had sales of $1.3 billion and a net loss of $39.9 million.

That's why analysts figure the stores likely will fetch just $250 million. After receiving several overtures, Petrie executives say they are in talks with one potential acquirer. But as Vice-Chairman Peter Left puts it: "A lot of people are interested." Milton Petrie's last deal could draw a crowd.

By Ron Stodghill II in New Yo

ELIVER US FROM WEEVIL: SCIENTISTS ARE DRIVING THE PEST OUT OF THE SOUTH

A COTTON-PICKING LAND RUSH

pickup in demand is helping farmers quit tobacco

As a boy, Ward McCoy knew summer was dying when the air grew moist with the sweet smell f curing tobacco. For three generations ow, the McCoy spread in North Carolia's coastal lowlands has been a tobacco rm. But that heritage means little with ntismoking campaigns stubbing out deand for cigarettes. So this spring, rathr than invest $80,000 in new tobaccorowing equipment, the McCoys won't aise any tobacco. Rather, they'll grow otton on every one of their 1,200 acres. f I stayed with tobacco and the market ent out, it might take me out with it," ays McCoy, 33.

A lot of other farmers across the outh are making a similar noice. Indeed, cotton-growg is suddenly a booming usiness. U. S. farmers will ant almost 13.7 million res of cotton this year, ose to the 70-year high set 1991. True, a harsh rought in the Texas highnds and a recent dry spell the Southeast could make ch projections overly optiistic. But most farmers outle Texas still expect a good op. And with cotton prices rising—up 23% from last year's levels—most are expecting big profits, too.

To be sure, tobacco still has plenty of allure. Farmers can clear $1,200 from each acre of leaf—nearly 10 times the profit on cotton. But the government's price support system strictly limits how much tobacco farmers can raise. And the fall in domestic cigarette consumption—it's off 10% since 1990—is causing cutbacks in the crop. The tobacco quota fell 10% this year, and growers expect it to be pared by as much as 30% in 1995.

American Brands Inc. demonstrated just how bad things are getting when it announced on Apr. 26 that it is selling its cigarette business to Britain's BAT Industries for $1 billion—rather than risk duking it out in a collapsing American market.

All this pessimism makes growers reluctant to invest heavily in tobacco, despite its high margins. "Our farm debt is in cotton equipment right now. We don't have any debt in tobacco equipment," says F. H. "Buzz" Shackelford Jr., a Hookerton (N. C.) farmer who planted cotton on 800 of his 1,200 acres this year.

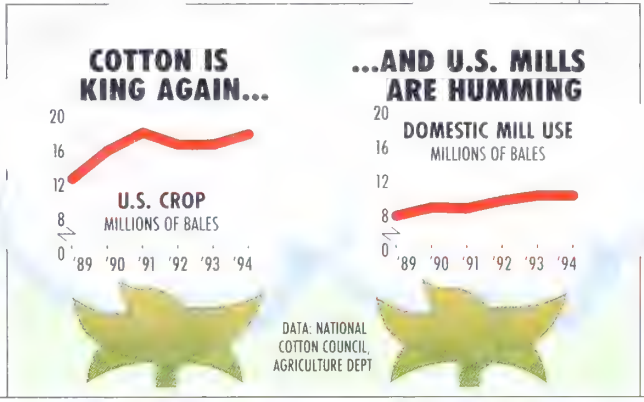
Meanwhile, other forces are helping push U. S. cotton to the fore. For one, severe insect and plant virus problems have hit rival cotton-growing nations, such as China, India, and Pakistan. With those nations now short on cotton, U. S. exports could jump 28%, to 6.7 million bales, this year. And at home, the increasing popularity of wrinkle-resistant, 100% cotton fabrics has given demand a boost, too. "It's like a land rush into 100% cotton," says Frank D. Bracken, executive vice-president at Dallas-based Haggar Corp.

SPINNING WILDLY. Higher demand has mills investing heavily in new cotton-ginning machinery. At Parkdale Mills Inc. in Gastonia, N. C., 14 of its 21 mills now handle nothing but the white fiber—and since February they've been running 'round the clock, seven days a week. "I spin what the customer wants, and the customers want cotton," says Parkdale Chairman W. Duke Kimbrell.

Meanwhile, scientists seem to be overcoming one of the South's most vexing opponents since General Sherman—the boll weevil. In the 1980s, cotton growers got eaten alive by the bug. "They traveled in fives," says Charles E. Perry of the University of Georgia's College of Agriculture & Environmental Sciences. "Two eating, two in the bloom making love, and one sitting on the leaves, looking out for airplanes." An aggressive federal-state eradication program, however, has driven the boll weevil out of North Carolina and Georgia, and thinned its ranks in Alabama and Florida.

All of which leaves Andy Moy with a bittersweet success. This year, Moy is planting cotton on 1,500 acres of his Snow Hill (N. C.) farm. He has invested $2.5 million in a gin that cleans cotton bales from other farms as far off as 100 miles. He leases his sole 30 tobacco acres to another farmer. "I still think there's some good years left in tobacco," Moy says. But he advises tobacco farmers to invest their profits in cotton-growing gear. Indeed, with King Cotton making a comeback and Sir Walter Raleigh wheezing on the couch, that could be a princely move.

By David Greising in Atlanta



PHOTOGRAPH BY SARAH LEEN; MATRIX GRAPHICS BY ALAN BASEDEN

ENTREPRENEURS

FROM RIOT AND RUIN, A SURPRISING HARVEST

Inner-city Los Angeles kids green-thumb their way to healthy profits

Jaynell Grayson is an unlikely entrepreneur. A junior at Crenshaw High School in Los Angeles, she lives with her grandfather in Watts, negotiates three buses to school, and bags groceries after classes to earn a living. She's also the 5% owner of a fledgling company that is so far the most visible evidence to date that the city's much-hyped efforts to rebuild after the riots are working.

In April, Grayson and her co-owners—38 other inner-city teenagers—pulled off the improbable launch of their company's first product, a bottled salad dressing. In December, the company, called Food from the 'Hood, won a $50,000 grant from Rebuild LA, the city's riot recovery agency. The money allowed the kids to set up offices, then develop and produce their first batch of creamy Italian. The company also has obtained the counsel of an impressive array of local professionals and shelf space from nearly every supermarket in Southern California, some 2,000 stores in all.

GREAT LAUNCH. "We've gained 100% distribution in this market, which is phenomenal for a brand new product," says Russell Landreth, president of Bromar Southern California, a division of food broker Bromar Inc. Bromar won the competition to rep the product for a standard 5% of sales. Food from the 'Hood's initial plan is to sell 30,000 cases, "a very reasonable and attainable goal," Landreth says. That would yield pretax profits of some $100,000.

Heady stuff for a bunch of kids in baggy jeans and braces who got their start by renovating an overgrown garden behind the school for extra credit in a biology class. After the riots two years ago, they decided to form a company that would manage the garden, with a quarter of the output donated to the needy and profits from the rest going to college scholarships for the student owners. The first school year netted $600 for three scholarships. "That's just a healthy dent in book fees," says Ben Osborne, a 16-year-old owner. "It's not very much."

The kids realized they needed a branded, manufactured product that could be distributed more widely than produce. They also needed expert advice. They got ex-marketing executive Melinda McMullen, who signed up full-time under a state grant to fund riot recovery efforts. She suggested salad dressing and brought in an investment banker to help with the business plan.

The kids' real catch was Norris Bernstein, a food products marketing consultant best known as the founder of Bernstein's Salad Dressing, one of the largest-selling regional brands in the country. Last fall, Bernstein, 64, read about the kids' ambitious project in the newspaper. "They were at the stage where they had developed the product and lined up a manufacturer, but were unsure about how to market it," he says. Bernstein taught them the basics of distribution and introduced them to key contacts in the packaged goods and supermarket industries.

The kids learned well. They figured they could employ some unorthodox techniques to highlight their product. Normally, the broker's account executives are responsible for pushing retailers to accept the product. But the student-owners wanted to go along to make some of the presentations. Grayson, for example, works at the Lucky supermarket near the school and figured that she could help persuade executives at Lucky Stores Inc. to stock the product. "They were acting skeptical at first," she says. "But I knew we had it nailed when I told them I hoped to see it in my store."

LOTS OF HOMEWORK. While Food from the 'Hood has appealed to the philanthropic nature of the retailers who agree to stock it, in the end the product will have to stand on its own to win sales. And there are signs that it will. "We see lots of companies trying to develop new products that don't do half the research that these high school kids did," says Harold Rudnick, senior vice-president for procurement and merchandising at Vons Companies Inc., Southern California's largest grocer—which plans to stock the students' dressings chainwide. "They've done all the work necessary to introduce a product to the marketplace and develop it into a good business."

With the launch of the first product behind them, the buzz around the office at Food from the 'Hood is changing. Now, you hear talk of "line extensions" and "brand managers"—not exactly the language of your typical high schooler. And there's an underlying desire to tie the product more closely to its roots in the garden, perhaps to develop a year-round source of the basil and parsley that gives Food from the 'Hood Creamy Italian its punch. See there's this rickety old greenhouse out behind the science classroom. It needs a lot of work and new glass on the roof. The kids already have their eye on it.

By Larry Armstrong in Los Angeles

Nearly every supermarket in Southern California has given shelf space to a salad dressing thought up by kids gardening behind their school

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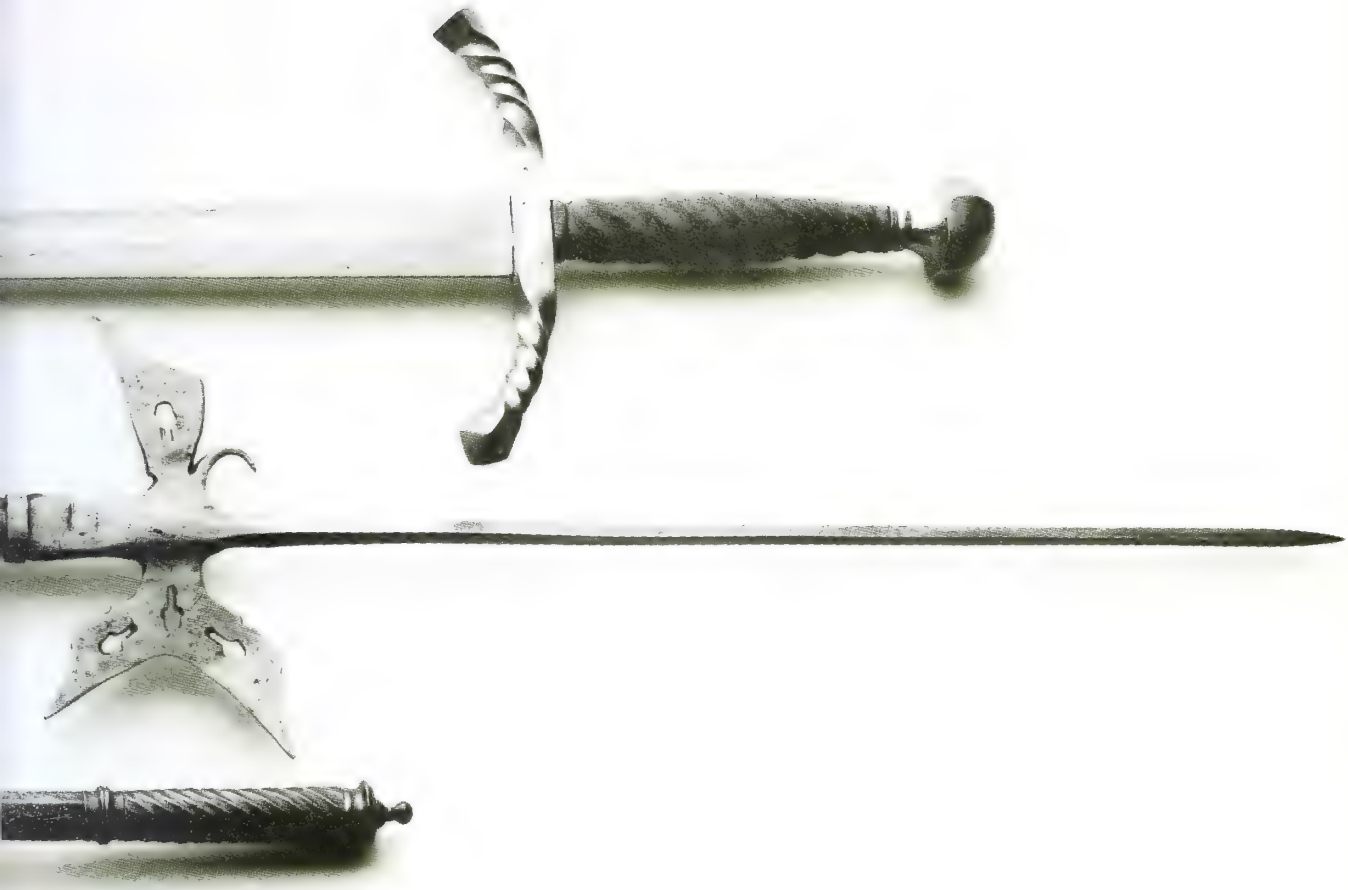

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METAPHOR

EDITED BY KEITH H. HAMMONDS

LIGHTENING UP ON HEAVY EQUIPMENT

There's a lot of dirt flying in the heavy-equipment industry. On Apr. 26, Tenneco announced it would sell 35% of its J. I. Case farm-and-construction equipment unit, a move analysts say could raise $500 million for the Houston-based conglomerate. A day later, Varity said it will sell its U. K.-based Massey-Ferguson to AGCO for $328 million. It seems to be the right time to sell: Both the farm and construction markets are booming in the U. S., and a recovery in Europe later this year could push industry profits sky high. Indeed, during the first quarter of 1994, Case posted operating income of $82 million, compared with a loss of $17 million the year before. And sales jumped 22%, to $1 billion. Case will spend $500 million through 1996 updating its product line. A restructuring plan that has closed plants and rejiggered Case's distribution network will add an additional $200 million to operating income by 1996. And the company, which long hascut prices to prop up market share, has discontinued the practice.

CLOSING BELL

SKETCHY SALES

Toy industry profits are notoriously unpredictable in the months following Christmas. Still, Ohio Art's disappointing first-quarter raised eyebrows. The venerable maker of Etch A Sketch lost $862,000 on sales of $6 million, down 29%, atop big sales and profit declines in 1993. The loss itself wasn't unusual—bad weather and retailer conservatism hurt other toymakers—but the company's explanation was: It talked of "weak yet strange order patterns" in the U.S. and lower international shipments because of a restructuring at its major European distributor. Officials wouldn't elaborate, and thinly traded Ohio Art shares dropped $4.50 on the news.

DATA: BRIDGE INFORMATION SYSTEMS INC.

GM VS. LOPEZ: WHAT THE D.A. FOUND

How much is José Ignacio López de Arriortúa worth to Volkswagen? About $8.40 a share, say Frankfurt börse mavens. That's how much they cut off VW shares Apr. 27, after Darmstadt district attorney Volkmar Kallenbach released an "interim report" on investigations into General Motors' complaint that its ex-purchasing supremo took confidential papers to VW in March, 1993. The probe of thousands of documents isn't complete. But Kallenbach confirmed that the haul contains sensitive data ranging from secret plans for a new small car at GM's Adam Opel division to details of cost-cutting for GM's U. S. cars. Lopez denies any wrongdoing; a VW spokesman, Andreas Meurer, insists: "At no time have [GM] data or documents been worked on at VW."

HALLMARK GOES HOLLYWOOD

For Hallmark Cards, the message looks like a better investment than the medium. Hallmark announced on Apr. 26 that it will buy RHI Entertainment, a producer of family oriented TV miniseries and movies, for more than $365 million. The deal makes sense: The Kansas City-based greeting-card maker is well known for its wholesome *Hallmark Hall of Fame* television productions. The two companies already are working together on eight made-for-TV extravaganzas, including *Scarlett*, an eight-hour sequel to American Civil War epic *Gone With the Wind*. But privately held Hallmark is retreating further from the distribution end of the business. In 1992, it sold Univision, a network of nine Spanish-language television stations. Now, its cable system with 850,000 subscribers, Crown Media, is on the block.

BARNEYS GETS DEEPER POCKETS

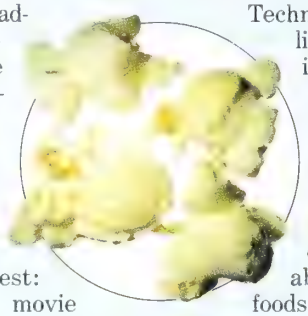
Suppliers complain that Barneys New York, the upscale apparel and home-furnishings retailer, has a history of taking its time to pay for merchandise. Perhaps that's because the tony specialty-store chain, which opened a store on Manhattan's Madison Avenue last year, hasn't been very profitable: It earned ju $6 million on $151 million sales for the last five mont of 1993.

The good news: Barne has shored up its cash po tion. In mid-April, investme bankers at Chemical Ba raised $40 million for t company in a private pla ment of unsecured debt t group of insurance comp nies. Barneys will use $3 million to pay off some ba debt and will plow the mainder into its specialt store chain.

HEADLINER

CHEWIN' THE FAT AT THE MOVIES

Popcorn! Is nothing sacred? Not to Michael Jacobson, executive director of the Center for Science in the Public Interest. A string of reports in the past year from the nonprofit consumer-advocacy group—remember the treatise on Chinese food?—have enraged the food and restaurant industries. And on Apr. 25 came the latest: Popcorn sold in movie theaters, the CSPI says, has twice the saturated fat of a Big Mac. And that's without the butter flavoring.



Can't we nosh in peace? Nope. Jacobson is out to change the way food is advertised, sold, and eaten. "Our studies contain needed—ev shocking—information abo foods that everyone eats," says. And Jacobson, who h a PhD in microbiology fr the Massachusetts Institute Technology, has d lighted in sprea ing the ne since 1971. T Center newslette which claims circulation 750,000, enligh ened America about fatty fa foods in the '70s a about tropical oils in the '8 Jacobson has plenty of cr ics. In the end, though, h effective. "I can't imagine t many people getting popco at the movies tonight," says. Trail mix, anyone?

By Julie Tilsn

ET CETERA...

- IBM's human resource chi Gerald Czarnecki, resigne wanting to run his own sh
- Eastman Kodak's profi were up on strong imagi results, but sales were flat
- Canada's free-market less Cut cigarette taxes, and sa go up—by 63% in March.
- Seeking growth, Rubb maid said it plans to ent two new businesses by 199

EDITED BY OWEN ULLMANN

WHY CLINTON STILL TIPTOES AROUND MOYNIHAN

President Clinton humiliated Health & Human Services Secretary Donna E. Shalala and annoyed Administration officials on Apr. 25, when he came out in favor of making the Social Security Administration independent of HHS. But Clinton knew that somewhere, Senate Finance Committee Chairman Daniel P. Moynihan (D-N.Y.) would be smiling.

Clinton's support for a new Social Security agency—one of Moynihan's pet projects—came just a day after the Senator warned on TV that Clinton was fumbling U.S. leadership on Bosnia. Once again, Clinton had succumbed to a troubling pattern: Moynihan assails the President, gets a Clinton concession in return, and then goes back for more.

Unfortunately, Clinton can't dismiss the New Yorker as another vain but harmless senator who needs stroking. Moynihan is both prickly and powerful: He will play a key role in health-care reform and welfare overhaul, two of Clinton's top domestic priorities. And despite the President's charm offensive, the gap between Hell's Kitchen and Hope, Ark., never seems to close.

"NO GET." A Harvard highbrow with very definite ideas about what New Democratic policy should look like, Professor Moynihan has been conducting a running tutorial for the Student President, who is more comfortable finding political compromise than sticking to ideological principles. Indeed, the Social Security decision angered Administration liberals, who had opposed moves to carve up Shalala's department. And it caused grumbling among Clinton aides, who fret that the President's policy of appeasement isn't producing much in return. Gripes one senior official: "It's all give and no get."

That's because Moynihan won't tell Clinton just what he wants, and the pair disagree on priorities. Clinton's No. 1 goal is health care—an issue that holds little fascination for Moynihan. Since the 1960s, the New Yorker has championed a massive overhaul of welfare. He suspects that, despite Clinton's campaign vow to "end welfare as we know it," the President will serve up a watered-down plan designed to appease antiwelfare sentiment—a ploy Moynihan dubbed "boob-bait for the Bubbas."

Clinton shouldn't be surprised that Moynihan is fighting for what is rightly a Presidential prerogative: setting the agenda. White House aides forecast such a tussle early last year, but they wrongly predicted that they could "roll right over" Moynihan if he tried to be an obstructionist. Instead, they're jumping through hoops.

POWERFUL AND UNPREDICTABLE

PANDORA'S BOX. For example, Moynihan's carping has pushed Clinton closer to releasing a welfare plan this spring. The Clintonites have loaded their draft proposal with ideas intended to satisfy him, among them a focus on younger welfare mothers. But these provisions will still likely fall short of the Senator's own, more comprehensive vision.

Problems also could emerge over Social Security. Although making it a separate entity looks innocuous on the surface, Clintonites fear Moynihan will see an opening to clamor for a big fix to ensure the program remains solvent once baby boomers start retiring about 2010. It is a political Pandora's box that Clinton doesn't even want to think about this term.

Such unpredictability by Moynihan keeps the White House perpetually off balance. Indeed, Administration pols moan that they spend more time stroking him than any other lawmaker. That will never change. Pat Moynihan was a New Democrat when Bill Clinton was a college radical. Now Clinton has adopted the rhetoric of the party's moderate reformers, but Moynihan wants to give him periodic raps on the knuckles to make sure the President's deeds match his words.

By Howard Gleckman and Susan B. Garland

CAPITAL WRAPUP

POLITICS

So what if GOP hopeful Jack F. Kemp has a three-decade link to Buffalo as a National Football League quarterback and congressman? If he runs for President in 1996, he'll do it as a Californian, not a New Yorker. The former Housing & Urban Development Secretary was born and grew up in Los Angeles. Associates say a California address aids fund-raising and makes it easier for Kemp—who has lived in Washington for years—to run as an "outsider." Another factor: California moved up its Presidential primary from June to March, making it a more crucial race. Kemp's political-action committee relocates from Washington to Sacramento on May 2, and Kemp is expected to move to L.A. later.

THE WHITE HOUSE

When Hillary Rodham Clinton gave in to demands for her first-ever White House news conference, reporters had visions of frequent meetings with the First Lady. No chance, say White House insiders. Mrs. Clinton's Apr. 22 session was meant to deflect Whitewater charges, not provide accountability on her policymaking activities. "We don't want to set a precedent," says one Hillaryite, who claims Mrs. Clinton fears that regular press parleys could upstage the President.

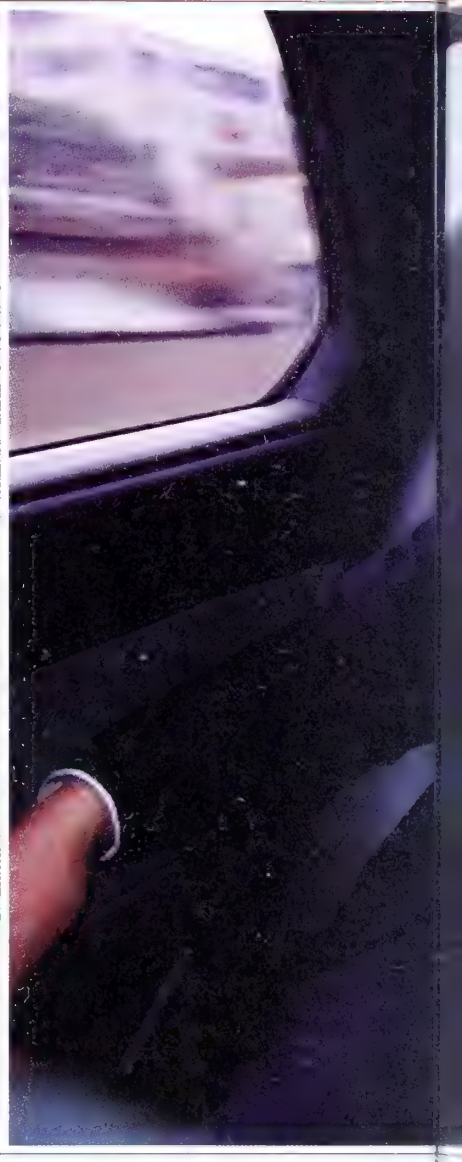
INDUSTRIAL POLICY

The Clintonites don't shrink from guiding the invisible hand with a little government largesse. Since last fall, the White House has teamed up with industry to launch initiatives in "clean" cars, advanced semiconductors, electronic packaging, and flat-panel displays. So what's next? The decidedly low-tech construction industry. The U.S. has fallen sadly behind Japan and Europe in developing new building materials and methods—for everything from houses to bridges. The idea is for industry to pick the next-generation technology, and Uncle Sam will help develop it.

BURNETT CONTACT

RED CAPITALIST

INSIDE THE WORLD OF CHINA'S HOTTEST DEALMAKER



Huang Yantian, president of the financial arm of Guangdong province, is one of China's premier dealmakers. As head of Guangdong International Trust & Investment Corp. (GITIC), he has knitted together agreements with companies like McDonald's, PPG Industries, and Pabst Brewing Co. Now the 53-year-old Huang hopes to nab his biggest prize yet: a $1.2 billion minivan project with Chrysler Corp.

On Apr. 21, he met with Chrysler CEO Robert Eaton and a team of senior Chrysler executives at his well-appointed headquarters, GITIC Plaza in the southern city of Guangzhou. Provincial officials must ultimately choose whether Chrysler or Daimler Benz's Mercedes unit gets the plum contract, but Huang has already made up his mind. "GITIC will do its best to help Chrysler win the project," he says.

When it comes to clout, few Chinese businessmen can match Huang. With the market value of GITIC's assets estimated at $5.5 billion, his conglomerate's reach extends from foreign joint ventures to complicated corporate finance deals (table). GITIC is the largest investor in industry and infrastructure in Guangdong—the fastest-expanding region of China, with a torrid 15% growth rate. Huang says GITIC's assets and profits will jump by 15% to 18% annually through the year 2000.

The rise of GITIC is part of a trend across China toward local financial powerhouses. For more than a decade, Beijing has pushed the decentralization of the economy, leaving local governments to create companies to finance infrastructure projects and compete for overseas money. Since Beijing's archaic banking system is only now getting an overhaul, GITIC and similar local finance companies are at the center of the drive to raise the funds needed to maintain China's brisk economic growth.

GITIC's goal is to become China's first merchant bank. Already, the group holds stakes in scores of companies and nurtures their development. While GITIC is backed by the Guangdong government and Huang is a longtime Communist Party member, he bears little resemblance to old-style bureaucrats used to mouthing political bromides. Savvy in the ways of Western-style finance, Huang is a member of China's new class of "red capitalists"—politicians, tycoons, and dealmakers all in one.

"LET'S ACT FAST." These local financiers could offer a crucial measure of stability as China attempts to complete its economic transformation. With inflation on the rise and workers facing massive layoffs, Beijing is intent on maintaining stability. By attracting foreign capital and developing new businesses, GITIC and other international trust and investment corporations, or "ITICs," are helping to create jobs for some of the millions of migrants who have left rural areas in search of work in coastal regions like Guangdong.

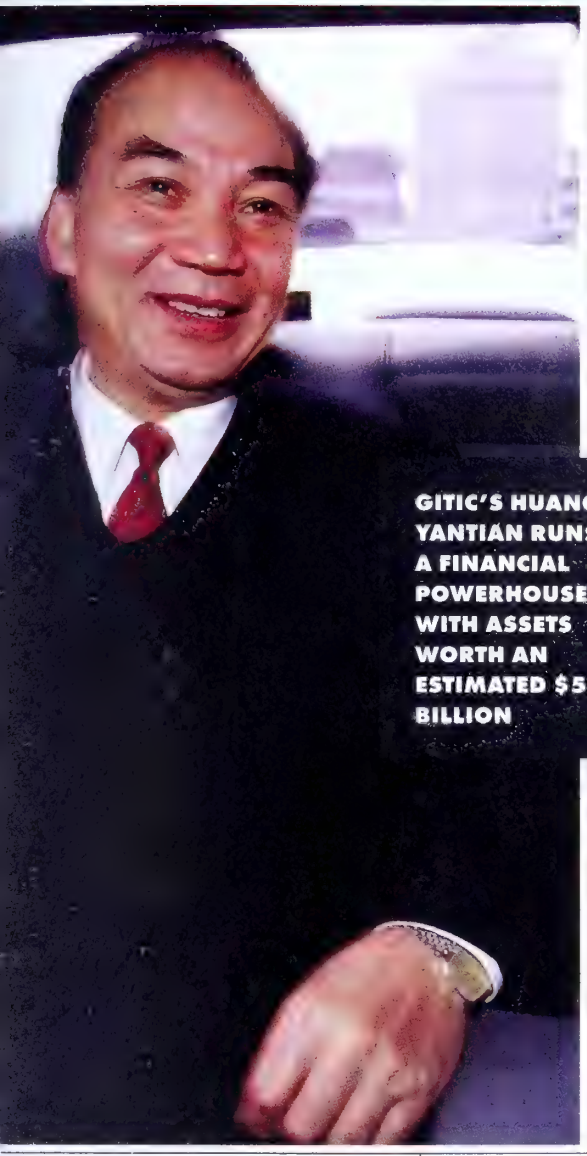
In the race to attract capital, Huang has a headstart over his provincial counterparts. Guangdong was the birthplace of China's economic reforms 15 years ago and is now benefiting from the integration of its economy with neighboring Hong Kong. Even today, GITIC continues to bound into new fields of finance. Its latest financial product is a computer service that provides everything from real-time stock figures to weather forecasts. "We should monopolize this business," Huang tells his securities department chief during a meeting at GITIC's trading floor in Guangzhou. "Let's act fast and not let others catch up."

GITIC'S BIG REACH

RIVERSIDE PLAZA IN GUANGZHOU: ONE OF MANY HUGE PROJECTS

JOINT VENTURES

- Runs five McDonald's restaurants in Guangdong and expects to open five more by 1995
- Wants to help Chrysler win approval to produce minivans in Guangdong
- Cooperates with PPG Industries in a Shenzhen factory



GITIC'S HUANG YANTIAN RUNS A FINANCIAL POWERHOUSE WITH ASSETS WORTH AN ESTIMATED $5.5 BILLION

For now, Huang has little reason to ɔrry. Other than the central govern-ent's China International Trust & In-stment Corp. (CITIC), there are few ɣals capable of taking on GITIC. "In the ort-term future, it has no competition Guangdong," says C. K. Kong, an ana-st at Moody's Investors Service Inc. As a result, Huang's office is a re-lving door of American and Japanese nkers, eager for a piece of lucrative fi-ncing or corporate deals. During a two-day period in February, key officials from Lehman Brothers, Industrial Bank of Japan (IBJ), Citibank, and Goldman Sachs all made the pilgrimage to GITIC Plaza. IBJ executives, for example, came to sign off on a $30 million loan.

American companies also are beating a path to his door. Huang has a booming joint venture with McDonald's Ltd., which has opened six restaurants in Guangzhou since 1992—with another five expected to open by 1995. From Merck, GITIC has licensed the patent for the hepatitis B vaccine for $7 million. Huang has provided loans to a local company so that it could import beer production lines from Pabst. And GITIC is a 50% partner in the Guangdong Float Glass Plant, a $100 million joint venture with PPG Industries.

Huang was cooperating with Chrysler long before the recent high-profile trip by Eaton. GITIC, for example, did the feasibility study for Chrysler, and Huang helped Eaton line up important meetings with the governors of Guangdong and Hainan provinces on his trip. Eaton left behind six staffers who are now working on the deal. A decision is expected in May.

Aside from spurring investments like Chrysler's, Huang also wants to attract capital for power plants, telecommunications systems, and highways. State banks can't play a leading role: Many are strapped for cash because they have to bail out unprofitable state enterprises that keep millions of workers employed.

Enter GITIC with its arsenal of the latest financial techniques, such as risk management and currency-linked borrowing. "When we talk about sophisticated things, they understand us," says the Guangzhou-based Timmy Chan, vice-president and South China operations head of Citibank. Officials from the southern city of Nanhai, for example, recently visited Huang in search of funds for a new power plant. He urged them to turn to U.S. investment houses. "You can sell shares of your [old] plant to Goldman Sachs and use that to invest in a new plant," he recommended.

GITIC makes commercial loans, issues bonds, and trades securities. Its two securities departments rank near the top traders in terms of volume on the Shenzhen stock exchange. And GITIC is also issuing renminbi loans, creating on-line financial services and financial software, and converting enterprises to shareholding entities.

In its latest move, the company is planning to underwrite share issues in Shanghai and Shenzhen, China's two fledgling bourses, as well as in Hong Kong and Canada. In 1993, GITIC helped nine companies make the transition from state enterprises to shareholding companies. Now, GITIC wants to underwrite B-shares—or those sold to foreigners—of two local manufacturers. "Our priority is to issue more public bonds and stocks this year," says Huang.

DRIVING FORCE. In the coming year, Huang also intends to set up a Guangdong investment fund in the U. S. or Hong Kong to raise money for major projects within the province. He wants to help sponsor several joint-venture companies in Guangdong to be listed on foreign exchanges. He is also planning to create a joint venture with an American investment house that will buy shares in power plants, bridges, and freeways.

Huang is the driving force behind all these plans. While Di Changyun is the chairman, Huang runs the operation. He spends an average of 14 hours a day on the job, though he breaks for lunch at noon and a nap at one. The day often ends at 10 p.m.—and he may stretch it

ANCE

- es bonds in Tokyo, London, New nd Hong Kong
- ides funding for power plants, high-and bridges
- ds in trading volume on the Shen-ock exchange
- os state enterprises privatize

REAL ESTATE/CONSTRUCTION

- ▶ Dominates Guangdong market, with more than 200 projects worth $232 million
- ▶ Owns plants that make cement, aluminum, and glass
- ▶ Operates 20 hotels throughout China
- ▶ Has investments in the U.S., Thailand, Hong Kong, and Macao

LEASING

- ▶ Helps companies lease advanced technology and equipment
- ▶ Has imported 150 production lines worth $360 million

DATA: GITIC, BUSINESS WEEK

another hour to hit GITIC's karaoke bar.

Huang has always been enterprising. Born in 1940 to peasants in Guangdong, Huang attended Zhongshan University, majoring in "philosophy," also known as Marxist-Leninist-Maoist thought. After graduating, Huang worked first as a teacher and then as a government economic analyst. When Deng Xiaoping's reforms began opening China to foreigners in 1979, Huang became secretary to the vice-governor of Guangdong. In 1983, he moved to GITIC.

Over the past 11 years, Huang has risen through the ranks, becoming president in 1990. From that position, he has been the ultimate salesman for Guangdong. While on a road show last year organized by CS First Boston and Bear Stearns, the two underwriters of GITIC's $150 Yankee bond, he sold fund managers on GITIC's worth. "Huang can sit down with a guy and let him know that [Huang's] got his finger on the pulse of what's happening," observes David P. Walker, managing director of CS First Boston (Hong Kong) Ltd.

POWER PERKS. Now that he's risen to the top, Huang enjoys the benefits that come to China's well-connected new elite. While his salary isn't up to Western standards, there are other perks. With his wife and younger son, he lives in a 4-bedroom apartment—palatial in China. His eldest son studies international finance at the University of Southern California. Huang rides to work in a silver-grey Lexus with smoked windows. A Mercedes sedan in the GITIC garage is at his disposal. Over dinner at the restaurant in his headquarters, Huang boasts about how service has improved: He has made waiters wear gloves when handling expensive bottles of wine so their body heat won't disturb the contents.

Like the heads of most Chinese companies, Huang makes all key decisions at GITIC. He does, however, send subordinates overseas for international training. GITIC has offices in Hong Kong, Macao, Thailand, the U. S., Australia, and Malaysia that are involved in finance and real estate. Patrick Li, for example, worked in GITIC's San Francisco office for five years before returning to Guangdong where he is the treasury division manager.

The way Huang runs GITIC is one reason McDonald's Inc. selected it out of 15 contenders to be its joint-venture partner. Since GITIC itself is part of the government, the company has unequaled *guanxi*, or connections, among local officials. As a result, GITIC knows how to work the system to get licenses quickly. Without *guanxi*, companies can see bureaucrats tie up the process forever. "They know the local environment," says James Chu, vice-president of McDonald's China Development Co. "They went directly to the right people, and the process was smooth."

Those connections also represent the greatest drawback GITIC faces. As a wing of the government, GITIC must make loans or back projects that the government deems worthy, regardless of profitability. Recently, a Guangdong company not backed by GITIC defaulted on a loan to Japanese bankers, and the province asked GITIC to make good on the loan. Says Li: "To protect the reputation of the province, we were given instructions to pay the loan." Furthermore, since public housing is a government priority, some of GITIC's new housing units are priced at levels far lower than the market value.

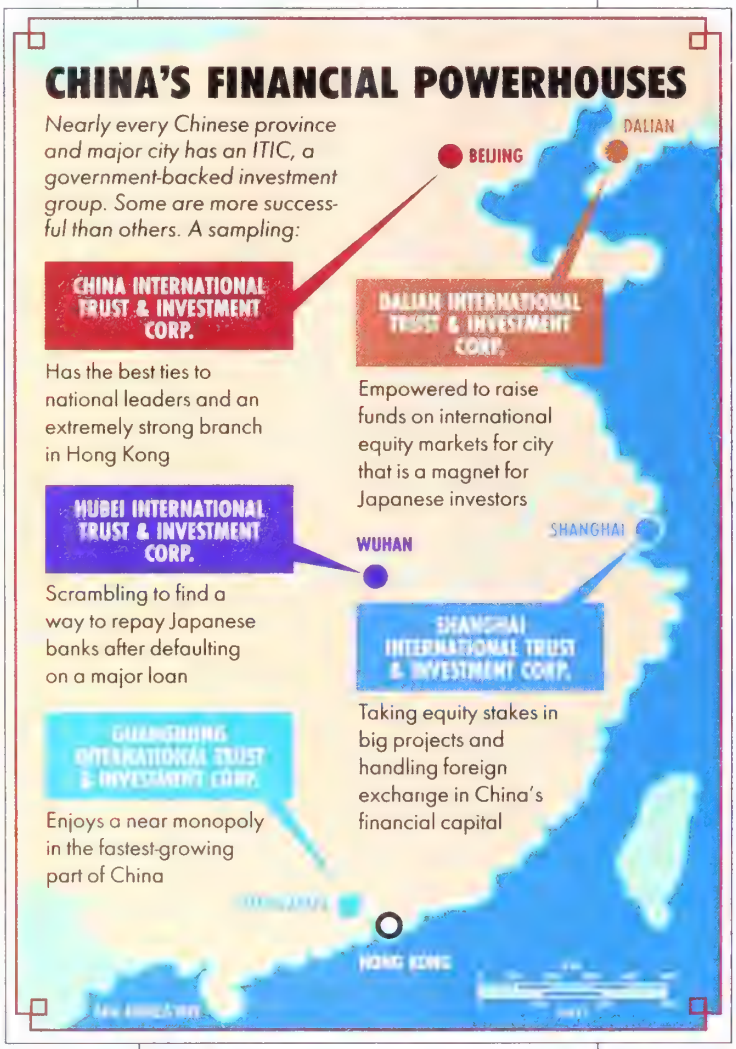
While GITIC is big in its home province, it hasn't become a major player in other parts of China. "GITIC is still very local," says Meocre Li, managing partner of Arthur Andersen & Co. in Hong Kong. In contrast, Beijing's CITIC is extremely active in Hong Kong and throughout China. On Apr. 23, CITIC announced plans to take a 55% stake in a $200 million retail and office complex in Shanghai.

Some analysts question whether Huang can handle the company's ambitious agenda. They worry that GITIC is getting into too many diverse projects. "If GITIC really does move in all these different directions, I'd be cautious and concerned," says an American banker in Hong Kong. "How are they going to manage such a diverse portfolio?"

HIGH INTENSITY. Huang is making some adjustments. He's in the process of streamlining each division into five corporate entities—hotel management and tourism, real estate, construction, power and transportation, and overseas operations. "This will help unify management and unify business transactions and together," he says. He also knows that he needs more white-collar employees to help supervise his workforce of 6,000.

For the moment, at least, Huang is relying heavily on his own intensity. During a meeting at GITIC headquarters with J. Michael Clatterbuck, senior vice-president of Lehman Brothers Asia Ltd., Huang explained how GITIC wants to set up a fund that would allow foreigners to invest in power plants, freeways, bridges, and other projects. "We want more foreign capital," Huang says. "As you invent new financial products, come and introduce them to us." That's a message being repeated all across China.

By Joyce Barnathan in Guangzhou with Bruce Einhorn in New York



FIDEL'S END RUN AROUND UNCLE SAM

Cuba is attracting more foreign investors—despite the American embargo

Rows of Mitsubishi minivans, Toyotas, and Subarus nestle between huge new warehouses stocked with canned food, clothes, and machinery at Havana In-Bond, a quasi-free-trade zone on the capital's outskirts. The warehouses are staging areas for goods entering Cuba, often destined for the hotels and other businesses Cubans are setting up with foreign partners. More than 24 trading companies, with headquarters from Panama City to Madrid, now operate in the zone.

CANADIAN DRILLING COMPANIES ARE HELPING LIFT OUTPUT

Driving along the *malecón*, Havana's famous seawall, Carlos Lluna dodges bicycles and buses while fielding calls on his cellular phone. The 32-year-old Spanish businessman supervises Intectur Cabe, an affiliate of a Spanish hotel-services supplier. But so many foreign companies sought its advice on doing business in Cuba that Lluna set up a separate consultancy to help them. "Our market is the future," he beams.

IRF RUSH. While Americans are barred by the U.S. embargo from doing business with Cuba, competitors from elsewhere—Canada, Mexico, Europe, and even Israel—are moving in. They are staking out business turf, from mining to beach hotel sites. By themselves, these deals won't solve Cuba's economic problems. But they are providing technology, management, and marketing links and helping reconnect Cuba to the world—including the U.S.'s two partners in the North American Free Trade Agreement. All this comes as the U.S. is trying to tighten the screws on Havana with the 1992 Cuban Democracy Act, which extends the embargo even to foreign subsidiaries of U.S. companies. Its aim is to reassure Fidel Castro to liberalize his regime. The drawback, however, is that other nations reject it. Mexico, for example, "always considered that the embargo served more to isolate than to change," says Andrés Rozental, Mexico's Under Secretary for Foreign Relations. "The proof of the pudding is that Castro is still there."

Indeed, Castro seems to be end-running his U.S. foes. On Apr. 22-24, he attracted 210 Cuban émigrés from Florida and other havens to a conference in Havana. Some exile-run companies may invest in Cuba. But so far, the biggest influx has been the boom in hotels built or managed by Spanish, Canadian, and Mexican operators. Tourist revenues are expected to total $900 million this year, overtaking sugar exports as Cuba's top hard-currency earner.

For Canadians, Cuba's allure is far more than sun and sand. Metals company Sherritt Inc., which bought an estimated $55 million worth of Cuban nickel last year for its Alberta refinery, is helping upgrade plants, while six Canadian companies are exploring for gold and other minerals.

Mexico is playing a major role in helping Cuba beat the embargo. The biggest deal may involve the Mexican government itself. Mexpetrol, a company partly owned by state oil company Pemex, is negotiating a venture to reopen Cuba's mothballed Cienfuegos refinery to process and reexport Mexican crude. Cementos Mexicanos is even negotiating a deal to operate a plant outside Havana that Castro confiscated in 1960 from Connecticut's Lone Star Industries Inc. "I am shocked at the conduct of Cemex and the Mexican government," says Lone Star Chairman David W. Wallace.

LOSING OUT. Other U. S. executives are not happy about being kept out of Cuba. Because of the U.S. ban on telecommunications investment, CEO Bernard J. Ebbers of LDDS Metromedia in Jackson, Miss., warns that "opportunities may be lost to our competitors from other nations." Britain's Cable & Wireless, for one, is discussing proposals to upgrade Cuba's phone system. And Carlos Slim, chairman of Teléfonos de México, visited Havana recently, seeking such a role.

Among exiles who worry that the chance to shape the "new Cuba" is being lost to foreign companies is Luis S. Mendez, a former senior executive at First Boston Corp. and Morgan Stanley & Co. He persuaded Western Union Financial Services Inc. to apply to the U.S. Treasury for permission to open an office in Havana to handle money Cuban-Americans send home. Although the project is on hold, Mendez believes such business initiatives are "the best way to achieve the Cuba I want to live in and the one the U.S. wants to do business with." But until U.S. policy shifts, the business will be done by foreign rivals.

By Gail DeGeorge in Havana and John Pearson in New York, with William C. Symonds in Toronto and Geri Smith in Mexico City

THE GROWING BUSINESS STAKE IN CASTRO'S CUBA

Company	Headquarters	Business	Investment (Millions)
MEXPETROL	MEXICO	Proposes upgrade of Cienfuegos refinery to process Mexican crude for reexport	$100
SHERRITT	CANADA	Helping modernize nickel plants, importing nickel to Alberta refinery	NA
CANADA NORTHWEST ENERGY	CANADA	Drilling exploratory offshore oil well, expanding output of old onshore fields	NA
CEMENTOS MEXICANOS	MEXICO	Setting up joint venture with Cuban state company to operate cement plant expropriated from Lone Star Industries	40
BM	ISRAEL	Managing 115,000-acre joint-venture citrus plantation, marketing fruit in Europe	22
TIMSA	MEXICO	Operating cellular-phone systems in Havana and Varadero	8

DATA: BUSINESS WEEK

ALEX QUESADA MATEN

MEXICO

CRISIS, *SI*—PANIC, *NO*

How Mexico is scrambling to soothe anxious global investors

For Mexico's rulers, this year has been one brush fire after another: guerrilla revolts, a political assassination, kidnappings, devaluation of the peso, and a $5 billion outflow of capital drawing down once hefty foreign exchange reserves. To prop up the currency, ward off a stock market slump, and soothe foreign investors, officials doubled interest rates, to 18%. Then, in late April, they inked a $6.7 billion currency-backup deal with the U. S. and Canada. So far, such steps have minimized the damage.

But there's no denying it: Mexico is in crisis-management mode as the country approaches the August presidential elections. For one thing, the sky-high interest rates—Mexico's cure for international investor jitters—are likely to keep economic growth at zero at least until the elections. And though life had returned more or less to normal after the assassination of Luis Donaldo Colosio, the candidate of the ruling party, anxiety has been fueled by the second kidnapping of a prominent executive in six weeks. Angel Losada Moreno, the vice-chairman of retailer Grupo Gigante, was seized by six gunmen in Mexico City on Apr. 25.

TEMPTED. It's against this tense backdrop that Ernesto Zedillo Ponce de León, the new candidate of the Institutional Revolutionary Party (PRI), is gearing up his campaign. Initially dismissed as a number-cruncher, Zedillo, 42, has shown some political savvy, reassuring voters that the economic jitters are temporary. "We have this short-term noise. But in 1995 the economy will be growing," Zedillo predicted in an interview with BUSINESS WEEK in his campaign headquarters.

Yet at a time when election pressures might normally be tempting the government to spend, Mexico's fabled technocrats are forced to pledge fiscal rectitude so as not to scare off investors. Balancing the budget this year will be a daunting task. Analysts say Mexico spent at least $5 billion in recent weeks to prop up the peso and stem capital flight, which lowered reserves to an estimated $19.5 billion. Budgeters must scramble to compensate for a drop in oil prices, tax revenue lost because of the recession, and a $3.6 billion rise in the cost of servicing the $40 billion domestic debt.

What's more, officials have had to accommodate such unforeseen expenses as a $5 million-a-month bill for leasing 15 military helicopters to patrol Mexico's power lines, which were hit by two terrorist bombs in January. The government raised cash by selling off its remaining shares in two privatized banks. After discreetly unloading $1.2 billion in Teléfonos de México shares in February, the government planned to issue $500 million in convertible bonds for the rest of its Telmex holdings in coming weeks. If more cash is needed, the state hopes to sell a $700 million stake in the Mexico City-Cuernavaca toll highway. "The trick is to make sure you have adequate international reserves," says one government strategist. "This shock will be transitory."

That message helped bolster a group of institutional investors, led by Merrill Lynch & Co., that visited Mexico City in late April. Finance Minister Pedro Aspe reassured the group that there would be no major economic surprises and that the government would defend the peso. Zedillo, too, addressed the visitors, insisting that he would win the election and reassuring them of Mexico's long-term potential. The investors needed soothing; many of them had suffered foreign exchange and stock market losses in the hundreds of millions of dollars in the past weeks.

LESS FRAUD? A few other bits of good news helped the Mexicans make their case. Nonoil exports, which already were growing at a 27.5% annual rate of 27.5% in the first two months of the year, should be boosted further by the peso's devaluation. And officials point out that the *pacto*, the wage and price agreement by the government, unions, and corporate leaders, will help prevent the devaluation from becoming inflationary.

Whether the environment remains investor-friendly depends largely on the election outcome. Thanks to the guerrilla revolt in Chiapas state and to widespread demands for more democracy, the August vote is shaping up to be the fairest ever held in Mexico, monitored by a newly independent Federal Electoral Institute and foreign poll observers. That reduces the chances for the PRI, which has held power for 65 years, to use fraud to win. Zedillo vows he would denounce any attempts at fraud. "I don't want anything to happen that could blur my victory," he says. But between the political uncertainties and punishing fiscal demands, Zedillo has four long months ahead of him.

By Geri Smith in Mexico City

MEXICO'S FINANCIAL WOES

- The key stock market index is off 10% for the year
- The new peso suffered an 8.5% devaluation
- Central-bank reserves have dropped 20%, to $19.5 billion
- Interest rates doubled this year to as high as 18%

THE STOCK MARKET: FAST-RISING EXPORTS HAVE HELPED

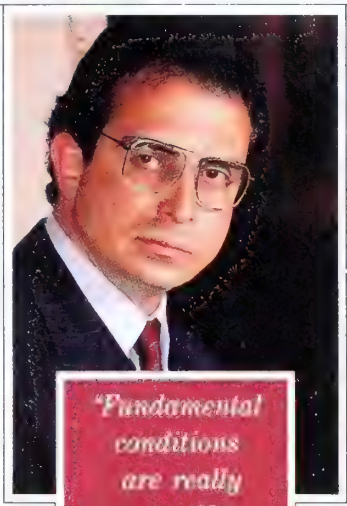
ZEDILLO: 'WE HAVE THIS SHORT-TERM NOISE'

RI Presidential candidate Ernesto Zedillo Ponce de León, 42, appeared self-onfident as he sank into a sofa at par-y headquarters to talk with BUSINESS *VEEK Mexico City Bureau Chief Geri Smith on Apr. 26. Excerpts from the nterview follow:*

On the economy: The fundamental onditions are really good. We have volved from being a very closed to a ery open economy. We have been ble to negotiate NAFTA. We should e very optimistic about the medium-nd long-run prospects.

On interest rates: I see the high nterest rates as a short-run phenom-non, derived basically from the un-ertainty after Mr. Colosio's assassina-ion. In a few weeks' time, interest ates will start to drop. Right now, he market has to pay a high-risk pre-ium. That's a reality of the market, nd you had better accept that.

On growth: There's no certainty hen we are going to see significant growth, because we have this short-term noise. But in 1995 the economy will be growing. The answer to growth is in private investment. We'll do whatever is needed to improve productivity at the company level, at the worker level. I will also spend more on education, health, and basic services. I will do that within the constraints of a balanced budget, which will be possible because growth will provide additional resources.



SERGIO DORANTES/SYGMA

On rich vs. poor: In the years ahead, we will correct [skewed] income distribution by using more efficiently our most abundant resource—labor—training that labor, boosting wages, and thereby achieving a better income distribution.

On the assassination: When I am President, if it is not solved, I will use any resource at the disposal of the state to investigate. [Overall] we have to review laws, to truly professionalize the Mexican police, and then see that the judiciary is really independent.

On Chiapas: I reject any violent action. But once [the rebels] decided to negotiate, they earned my respect.

On winning: It's obvious that the only party that has a comprehensive program to make the economy grow and produce the employment people are demanding is my party. I am the only candidate telling people how to solve problems.

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Fidelity Equity-Income II Fund	18.89%	—	25.85% (8/21/90 – 12/31/93)	★★★ ★★
Fidelity Growth & Income Portfolio	15.94%	17.25%	18.47% (12/30/85 – 12/31/93)	★★★ ★★
Fidelity Contrafund	17.78%	25.77%	17.30% (10 Year)	★★★ ★★

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EDITED BY STANLEY REED

JAPAN'S NEW PRIME MINISTER: PAWN IN A POWER GAME?

Just after Tsutomu Hata was assured of becoming Japan's Prime Minister, he called President Clinton and offered him help in getting the suspended trade talks back on rack. But the new Prime Minister's expression of goodwill ıay not come to much. Hata's ruling coalition is splitting part, threatening his ability to form a government. And ven if he does manage to get a Cabinet approved, Iata, 58, still seems too weak to deliver much on trade—or nything else.

Although he's a veteran politician and Cabinet minister, Iata is increasingly seen as a pawn in a power game mas-erminded by aspiring kingmaker Ichiro zawa. The 51-year-old Ozawa wants to omplete the restructuring of Japanese olitics that he began by engineering the ownfall of Japan's long-ruling Liberal emocratic Party (LDP) last year. Part f his plan is a downward shift of power o the generation in its 50s. The eight-ıonth tenure of Morihiro Hosokawa as rime Minister was just one step in that irection. Now, Ozawa aims to consoli-ate Japan's byzantine political system—ith its 15 parties—into a more manage-ble two-party regime. He hopes to lead ıe conservative group.

HATA AND WOULD-BE KINGMAKER OZAWA

ARALYZING. The latest crisis stems from an effort, orches-rated by Ozawa, to form a new five-party voting bloc. This ıove, made just hours after Hata's election by Parliament, ex-uded the Japan Socialist Party, the largest contingent in the oalition. They walked out in a rage. Political analysts say Oza-a hopes that right-leaning Socialists, as well as some mem-ers of the LDP, which still has the largest parliamentary oc, will leave their own parties and join his new group, illed Reformation. But his plan could well backfire, forcing urly elections. These would be held under the old rules that vor the Socialists and the LDP—not the new ones that Hosokawa pushed through to shift power to younger, more urban voters.

Ozawa's power plays are paralyzing the government. Without the Socialists, Hata will have a tough time passing a budget—let alone pushing through the fiscal stimulus and deregulation that the U. S. wants to help narrow Japan's $60 billion trade surplus.

What's more, there is little in Hata's background to suggest he'll prove a better negotiating partner for the U. S. than his predecessors. Hata has long deferred to the bureaucrats and is notorious for arguing in the mid-1980s that Japanese people would have trouble digesting American beef because their intestinal tracts were shorter. During the ill-fated trade talks in February, "Hata didn't show any freedom of action or divergence of views from the bureaucrats," says one U. S. official.

Despite his current reformist image, Ozawa is also far from a gung ho market-opener. While his best-selling 1993 book, *Blueprint for a New Japan*, calls for curbing the bureaucrats, Ozawa enjoys strong ties to the Finance Ministry. Analysts say the reason he cannot step forward to become Prime Minister is that the post would put his aggressive fund-raising under the spotlight. "Japanese people have doubts about his money links," says Takashi Kitaoka, president of Mitsubishi Electric Corp.

Of course, Hata and Ozawa are pragmatists and don't want a blowup with Washington. They are counting on Japan's political turmoil to buy them a few months' leeway before Washington turns up the heat. Whatever the U. S. does, Hata and Ozawa are apt to respond with the minimum it takes to head off major sanctions. But that's about all that can be expected now that Japan is back in the slow lane on reform.

By Larry Holyoke in Tokyo, with Amy Borrus in Washington

GLOBAL WRAPUP

BOSNIA AND CHINA

Call it the Bosnia Factor. Worried that President Clinton is perceived as constantly failing to follow through on his pledges to stand up to foreign bullies, the White House is toying with not fully renewing China's most-favored-nation (MFN) trade status when it comes up on June 3. Because the President has been savaged for not taking bold measures to stop the Serbian attacks on the besieged Bosnian city of Gorazde, some advisers are urging him either to revoke part of China's MFN status or else to punish Beijing for human-rights violations with targeted sanctions.

RUTSKOI'S REVENGE

Alexander Rutskoi, Boris Yeltsin's archenemy, has come back to haunt the Russian President. Rutskoi was jailed for his role in last fall's bloody uprising, but he got out of prison after receiving a pardon from Parliament.

Now, Rutskoi says he is ready to lead the forces opposed to the President. He may get a chance to test his current popularity at a large demonstration being planned for May 1 in Moscow. The emergence of Rutskoi has upstaged a Yeltsin effort to patch up relations with many of his opponents in Parliament.

SPANISH BANKS

Banco Santander has won the auction for Banco Español de Crédito (Banesto)—four months after the Spanish government intervened to prevent Banesto's collapse. As Spain's most aggressive and most international bank, Santander was the logical buyer, but its stock fell because analysts and investors considered the $2.27 billion price for control of Banesto too high. They think it will take several years for Banco Santander to make Banesto's operations profitable. Santander may decide to spin off some of Banesto's international assets, possibly to some of its own affiliates.

HARUYOSHI YAMAGUCHI SYGMA

SPONSORSHIPS

IMPRESSIONISM RIDES A RENTAL CAR

An Alamo-sponsored exhibit craftily blends culture and commerce

Michael S. Egan wants you to visit Shinnecock Bay on Long Island's south shore. He wants you to view a historic church at the corner of Middle and Church Streets in Gloucester, Mass. He'd like you to see New York's Central Park boat pond, Union Square, and McSorley's bar. And there are a dozen other sights around the U. S. the chief executive of Alamo Rent A Car Inc. thinks you should tour, especially if you arrive in an Alamo auto.

It's only natural that Egan wants to lure Americans out on the road. What's surprising is the vehicle he's using to do that: Alamo is sponsoring an exhibition of 80 paintings depicting those scenes, among others. "American Impressionism and Realism" opens on May 10 at New York's Metropolitan Museum, then travels over the next year to Fort Worth's Amon Carter Museum, the Denver Art Museum, and the Los Angeles County Museum of Art.

At each, museum-goers will find discount car-rental coupons in the exhibition brochures. Shoppers will get a coupon every time they buy something at a museum store. And everyone who attends the show's opening festivities in each city will leave with custom-made travel guides directing them to scenes in the paintings. Everyone who rents a Cadillac in the four cities while the show is on will get a guide, too. "Very clever," says Charles H. McCabe Jr., the Chemical Bank executive vice-president who oversees cultural contributions.

Alamo's blend of culture and commerce is so crafty, in fact, that it may send companies off in new directions, too. Because of economic pressures and the greater need for social philanthropy, U. S. corporations have trimmed their contributions to the arts by about 25% since a 1985 peak. For the gap to be filled, marketing departments will have to step in. They care less about the aura of arts sponsorships and more about product tie-ins. But they don't want to stir up carping about the crass commercialization of culture. Both companies and arts institutions are struggling to devise programs that do more than burnish the one's image without tarnishing the other's.

Fort Lauderdale (Fla.)-based Alamo, long known as a pathbreaking marketer, may have found a way. The brief bu classy travel guides contain fold-ou maps, postcards of three paintings, an two discount offers. They may ever yield media coverage, a rarity for art sponsorships. *Travel & Leisure*, *USA To day*, and travel-trade magazines may re print parts of the guide, Alamo says.

"HOME RUN"? The coupons offer multiple benefits, too. Those the Metropolitan Mu seum agreed to place in every bag used by its 12 museum stores are part of a exhibition flyer, which could boost atten dance. Each time a coupon is redeemed the Met gets 5% of the rental fee. An the coupons will provide clues to the re turn on Alamo's spending, which art sponsors find difficult to gauge. "Nothing I've seen is as innovative as this," say Sears Merchandise Group Vice-Presiden E. Ronald Culp, who is surveying art marketing for a forthcoming article in public-relations journal. "I hope it's home run. It would do such amazing things for arts sponsorships."

Alamo's effort didn't come cheap Egan paid the Met $2.5 million for package including this show, a William Harnett exhibition at the Met in 1992 and a display of 36 of the Met's 19th century paintings at the Fort Lauderdale Museum of Art in 1992. Throw in money for ads, and even before coupon redemptions and the guide's production costs Alamo is paying $3 million. For that, it could have bought 53 full-page, four-color ads in *The New York Times* Sunday Travel section. Or it could have underwritten a blockbuster—a Matisse retrospective, for example.

But Egan says the sponsorship "isn't

Alamo CEO Egan at McSorley's saloon in New York, and John Sloan's painting of the bar: Will the company's big investment pay off?

ltruistic. New Yorkers are a big source f our business. It's a way of saying hank you,' and when 'thank you' is said ncerely, it's remembered." Egan has ever studied whether Alamo's arts pending pays off, partly because he ears what the numbers might show. Another part is that this is about what ou want to be, not what some numer says you should be," he adds.

And for all of Egan's success in exanding Alamo into the nation's No. 3 ar renter, many still think of it only connection with vacation spots. Now, lamo's image may catch up with reality. The link with top museums should elp counter the spotty image Alamo hares with other rental companies, all harged with misleading ads and dubious ractices. Maybe that's why, when asked ow the Met courted him, Egan says: "I as, perhaps, wooing them."

Alamo worked to make the most of he association, though. Emily K. Raffery, the Met's vice-president for develpment, says museum staff and Alamo ffered only on "the wording and look of hings." Alamo wanted to use a car imge in ads, an idea the Met nixed. But he museum had no qualms about the oupons, which bother many museum irectors. "I'd never do it," sniffs one, ut the Met will get away with it beause it's the Met."

RIVATE PASSION. Observers believe Alao got a good deal—despite the price. everal note that any Impressionism ow will draw a big crowd. And David esnicow of Resnicow Schroeder Assoates, a public-relations firm that helps esign sponsorships, likes how the proam "engages people. Whether the couns are used is immaterial—they leave imprint that's deeper and lasts longer."

Egan, who owns more than half of e private $1.2 billion company, can afrd to care less about his return than CEOs of public companies. He admits amo wouldn't be sponsoring this show ere it not for his interest in art. As a ild, prompted by his mother, a painter, learned sculpture. He then took up afting and design, and later, oil paintg. Nowadays, he can sometimes be ind painting landscapes *en plein air* in orida or Nantucket, where he sumers. Egan also collects—contemporary t for the office and American landape paintings for his home.

To Egan, American art is a perfect itch for Alamo. "The urge to travel is rt of what we are as Americans," he ys. That explains why Egan plans to ıd more shows on the theme "Alamo ross America." And it's why Alamo is e of the few companies to hike arts ending in 1994. Museums are hoping ıt Alamo is again leading the pack.

By Judith H. Dobrzynski in New York

SMALL BUSINESS

BOWLES: DOUBLING THE BUDGET FOR LOANS UNDER $25,000

GIANT STEPS FOR SMALL BUSINESS

Erskine Bowles's reforms are turning the torpid SBA around

When Edward R. Power wanted to refinance $170,000 in loans for his Calhoun (Tex.) hardware store three years ago, he decided to apply for a guarantee from the Small Business Administration—a guarantee that would get him a lower interest rate. But when Power got the SBA forms, he found a stack of paperwork more than an inch thick that repeated many of the questions his banker already asked. The task was so daunting that he even considered hiring a professional "loan packager" to fill out the forms. "I'd still have had to spend about three weeks on the paperwork, so I said to heck with it," Power recalls.

Still smarting from his first run-in with the SBA, Power was skeptical when he returned to the agency earlier this year at his banker's urging. He wanted a guarantee for a $50,000 loan to expand his $320,000 business. This time around, Powers filled out a one-page application. His guarantee and loan came through in just five weeks. "It was easy," he says. Even better, Powers used the loan to add as many as 60 new products to his store. Already, sales are up 33%.

Fortunately for entrepreneurs, Power's second experience with the SBA is becoming more common than his first. Under the leadership of Administrator Erskine B. Bowles, the agency is slowly changing its popular reputation as a scandal-ridden, bureaucratic backwater that did more to stymie small business than aid its growth. Since taking over as SBA boss a year ago, the 49-year-old former investment banker has slashed the agency's infamous red tape and speeded the approval process for guarantees on small loans.

More significant, Bowles is trying to

KATHERINE LAMBERT

funnel more capital to small businesses. This year, the SBA plans to double, to $65 million, its budget for microloans under $25,000. Bowles is also trying to increase the comfort level of venture capitalists by providing long-term financing, not just loan guarantees, to help fast-growing startups. "We are starting to see change," says Bowles. "But it doesn't happen overnight."

While Bowles's support for the Clinton Administration's health-care package has alarmed many in the small-business world, his reforms have won the agency some much needed respect. "I would give him a B+. So far, it's very impressive," says John Paul Galles, executive vice-president of National Small Business United, a leading lobbying group for small companies.

NEW CLIMATE. That endorsement is quite a departure from the way the SBA traditionally has been seen. Because of loose controls, some private investors have been convicted of misusing SBA-guaranteed loans. And for years, the agency was regarded as a political dumping ground: Its last three administrators were failed senatorial candidates. Allegations of influence peddling have been common at the agency.

Not that the SBA today is free of political influence. Bowles, a longtime Democratic fund-raiser, was active in the Clinton campaign. But he also knows something about small business. After a stint at Morgan Stanley & Co. in New York, Bowles returned to his native North Carolina and founded Bowles Hollowell Conner & Co. to provide investment-banking services for small and mid-size businesses.

Bowles has moved quickly to change the atmosphere at the agency. After meeting with bankers, small-business owners, and SBA field employees, Bowles is moving 210 staffers from the SBA's Washington office and its 10 regional headquarters into the SBA's 68 field offices to improve service. That's only a small fraction of the SBA's 3,400-strong staff, but the transfers are helping. James W. Shelton, a loan officer with Richmond (Va.)-based Crestar Bank Inc., says he now discusses applications with the local SBA office before submitting them to clear up any questions. As a result, he has slashed his loan guarantee approval time in half, to a mere one week. "Several years ago, you couldn't even reach them," he says of the SBA.

The introduction of streamlined loan-guarantee forms has also gone a long way toward improving turnaround time for applications. Under the SBA's new low-documentation program, borrowers such as Power, who want guarantees for loans under $50,000, fill out a single-page application. That's a far cry from the roughly 150 pages applicants used to struggle through. Borrowers still have to provide collateral and fill out extensive applications for their bankers.

CHANGING THE SBA

BUREAUCRACY Bowles has slashed the paperwork needed to obtain guarantees for small loans. He is also transferring 210 staffers from SBA's Washington office and regional headquarters to 68 field offices.

FUNDING The SBA this year plans to double to $65 million its budget for microloans under $25,000. Bowles will also test a program this summer to preapprove guarantees for women entrepreneurs to speed bank lending.

PRIVATE CAPITAL To attract venture capitalists and other private investors, the SBA will go beyond issuing loan guarantees and will provide long-term financing to help fast-growing small businesses.

REGULATIONS Bowles has set up a task force of federal regulators from agencies such as the EPA and IRS to study ways to ease regulatory burdens on small business.

EXPORTS To promote overseas sales by small business, the SBA and other agencies are establishing 14 regional centers to provide export advice and information.

More ambitious are the SBA's plans to overhaul the Small Business Investment Co. program. This allowed private investors to establish SBICs by investing a minimum of $2.5 million. They then could raise more funds by issuing SBA-guaranteed debt. In theory, the combination of debt and equity would create a pool of capital that would be invested in startups. In practice, however, the startups took a while just to break even. And without any cash flow, many SBICs went under just trying to pay off their SBA-guaranteed debt. Roughly 200 SBICs are now in liquidation.

Now, under a plan approved by Congress in 1992, the SBA will assume the debt payments of some SBICs until they are profitable. Once those SBICs make money, they will repay the agency and give it a cut of profits. The agency will also tighten the requirements for participating private investors. Individuals or groups establishing an SBIC under the new program must put up at least $1 million. Already, the agency has heard from 40 investors who want to participate in the revamped program. "The old program doesn't interest us because you just can't invest in rapid-growth situations that way," says venture capitalist Wayne L. Clevenger. The SBA says the changes could attract $3 billion in new private capital over the next five years.

> For loans under $50,000, you fill out a single page, not the old 150-page form

TROUBLE SPOT? Bowles's initiatives also extend beyond just financing. Earlier this year he established a task force with other agencies, including the Environmental Protection Agency and Internal Revenue Service, to study ways to alleviate some of the regulatory burdens that drive up costs for small business.

Despite his progress, Bowles faces huge challenges. Noting plans to guarantee some $9 billion in loans in fiscal 1995, up from $7 billion this year, agency insiders fear the SBA can't prudently monitor the increase in commitments. So far, the SBA's loss rate on bad loans has been falling, to just 1.6% last year. But that could change. And other potential trouble spots the $1.2 billion in disaster assistance that the SBA lent so far to earthquake victims in California. The SBA fears some borrowers may have filed false information to obtain loans. "Our resources are not adequate to do the existing job," says Stephen Marica, the SBA's assistant inspector general for investigations.

Bowles's support of health-care reform may also hurt his popularity with small-business owners. Bowles says that small businesses could save money under the plan by banding together to buy coverage. But most small-business owners dread any mandated costs.

Still, some small-business owners will likely remain Bowles fans for quite a while. James D. MacKnight, for one, is thankful for the SBA's quick approval of a guarantee on a $175,000 revolving loan for his Ivyland (Pa.)-based salmon-importing business. "Without the SBA, we would have had to pass on some big accounts." For an agency that many thought should have been put out of its misery years ago, that kind of validation has been a long time in coming.

By Amy Barrett in Washington

WHAT DOES THE NEXT GENERATION WANT FROM US, ANYHOW?

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There's been a lot of hype about the information superhighway.

But for many companies, it's not just hype. They're on the verge of delivering broadband services. And we're the ones who are helping them do it.

Only AT&T Network Systems has the total solutions you need to get over the formidable hurdles associated with building a new broadband network. From highly trained salespeople who understand your business, to the engineering expertise of Bell Labs. From planning and manufacturing to installation and service. Plus the systems integration to tie in any mix of analog and digital, wired and wireless networks and the operations systems to manage them.

And we back it all with the reliability we're famous for.

Thousands of people ready to spend millions on new services. (Our total solutions let you deliver, fast.)

The biggest difference is that when you choose AT&T's Service Net-2000 total solutions, you know your investment is protected. We work to bring you products that grow with your network. Like the world's only evolvable ATM technology—the AT&T GlobeView™-2000 Broadband System. It accommodates a virtually endless stream of new services.

So you can add capabilities and capacity, year after year.

Our total solutions approach is why phone, cable and media companies in the U.S. and throughout the world have selected AT&T Network Systems to be their strategic partner. So don't put your broadband network together with just anybody. After all, people out there are demanding new broadband services. With our end-to-end solutions in place, you can start giving them what they want right away.

Before somebody else does.

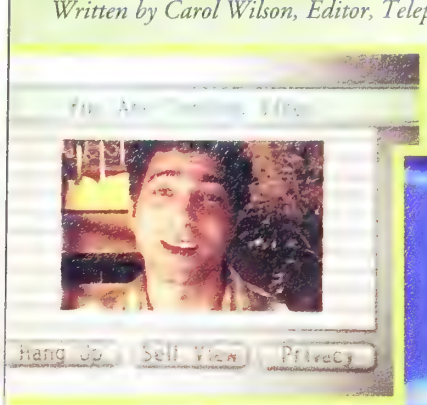
AT&T SERVICE NET-2000
MORE THAN JUST EQUIPMENT
WHAT YOU NEED TO COMPETE

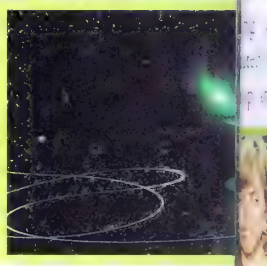
AT&T
Network Systems

the INFORMATION AGE

HERE TODAY, MORE TOMORROW

Written by Carol Wilson, Editor, Telephony magazine





From left to right: **Your TV is calling: the broadband network will be able to deliver full-motion video telephone calls right into the home; Comparison shopping at home: using simple menus, this shopping program lets viewers immediately compare features and prices of competing products like this juicer; X-rays over phone lines: teleradiology, being demonstrated here as part of US West's COMPASS project in Minneapolis, sends medical images to where the experts are, for greater efficiency in diagnosis and treatment; The one thin strand: telephone companies and cable TV companies are converting more of their networks to fiber optics, which makes it possible to carry voice, data and video signals to a wide range of customers; Work where you are: wireless services – including voice and data communications – will let businesspeople recreate an office on the road; Let your kids play TV: interactive television like Clickity Corners, an AT&T-developed spelling game, brings high-quality animation to educational programming.**

The Information Age is not right around the corner. It is here today. Using technology available right now, telecommunications carriers are meeting customer demands for high-speed data communications, multimedia networking, video and image transmission – all of the services often considered part of the futuristic information superhighway.

Much of the technology involved is in its infancy. As it rapidly matures and is deployed in the national telecommunications network, services are evolving that are improving people's lives. By interconnecting local area computer networks across cities and states, the public network enables more rapid product design and manufacture, improved and more personal customer service for all businesses and even more efficient government. By providing video links to educational facilities across a state, the network is improving education. And by shipping medical images across the city in a blink of an eye, the network is improving health care – without increasing costs.

Very soon, such services will be available not for the few, but for many.

The construction of this information superhighway network is generating excitement and hyperbole. Underlying and sometimes overshadowed by the excitement is a steady drumbeat of growth and change rattling the once stodgy telecommunications industry, transforming it into a dynamic new force in American business.

Service providers – including local and long distance telephone, cable TV and cellular companies – are adopting new technology at a pace that greatly exceeds any historical record. Driving that change are two trends: heightened user expectations and increasing competition.

In the business services arena, customers content five years ago with standard voice service and dial-up modems or dedicated lines for data, today want bandwidth on demand for voice, data and image services. With their local area computing networks already ramped up to 10 Mb/s they now turn to the public networks for flexible, highly reliable links that tie those LANs together over metropolitan areas with the same ease that PCs are connected within an office today.

Business customers want similar quality and flexibility in wireless service. They want wireless voice, data and messaging services that recreate on the road the same services available in the office. As competition expands and enters new markets, carriers must meet these demands or lose customers to more aggressive, responsive competitors.

Carriers are deploying switching and transmission systems that provide high-speed communications as well as

mputing systems that put network
ntrol at the fingertips of their own
chnicians – and their customers'
chnicians, too.

In the residential arena, a vision of
volutionary new services – includ-
g shopping, entertainment, educa-
on, commercial and
ousehold manage-
ent services – is dri-
ng change. Ulti-
ately, consumers will
op among a number

service providers for their preferred
el of quality, cost and features.

CATV and telephone companies are
sed to offer interactive video and
ce over a single network. Their
ly targets are home-computer
rs; home shoppers, via catalog or
and the growing army of people
o work at home, full or part-time,
entrepreneurs or telecommuters.
n, a new network – an interactive
adband network – will spread its
gs to envelope people whose first
ne computer will likely be a TV
top box, a screen-based telephone
basic video game set.

Wireless service will also reach into
home, offering low-cost, basic
ce service or more sophisticated
sonal communications services.
will allow calls to be delivered to a
on wherever he or she may be.

s this a futuristic technology wish
an engineer's fantasy? Far from it.
Trials of these capabilities are
erway and, in some cases, have already spawned commercial services. Many telephone companies are providing teleradiology services, which transmit radiology images over telecom lines between hospitals and clinics. Distance learning – which provides students direct visual and audio access to the best teachers even if those teachers are hundreds of miles away – is used in several states today using narrowband integrated services digital network technology or high-speed fiber optic transmission links. Through its Basic Education Connection program, Bell Atlantic is promising to provide free fiber optic connections to schools as it modernizes its network.

US West's three-year-old COMPASS trial – which is essentially a broadband laboratory – allows Honeywell to collect live infrared imagery from locations all around Minneapolis, including the Minnesota Supercomputer Center. Using technology from AT&T Network Systems and others, COMPASS allows IBM employees in Minneapolis to work at home but still have high-speed access to host computers in IBM's Minneapolis development lab.

The State of North Carolina is creating a broadband network to provide video links among state agencies and schools throughout the Tar Heel state. The network will improve the quality and efficiency of state services, including educational services. It represents the first statewide broadband network and could be the model for other states.

Broadband-to-the-home trials are underway in Virginia, Florida, Ohio, Nebraska and California. They involve CATV and telephone companies providing video-on-demand, various information services and PCS services. In California, Pacific Bell has made a commitment to rewire its entire territory, beginning this year and reaching 5 million homes by the year 2000, with a broadband infrastructure developed with AT&T Network Systems that will facilitate new services and be more efficient than today's copper network.

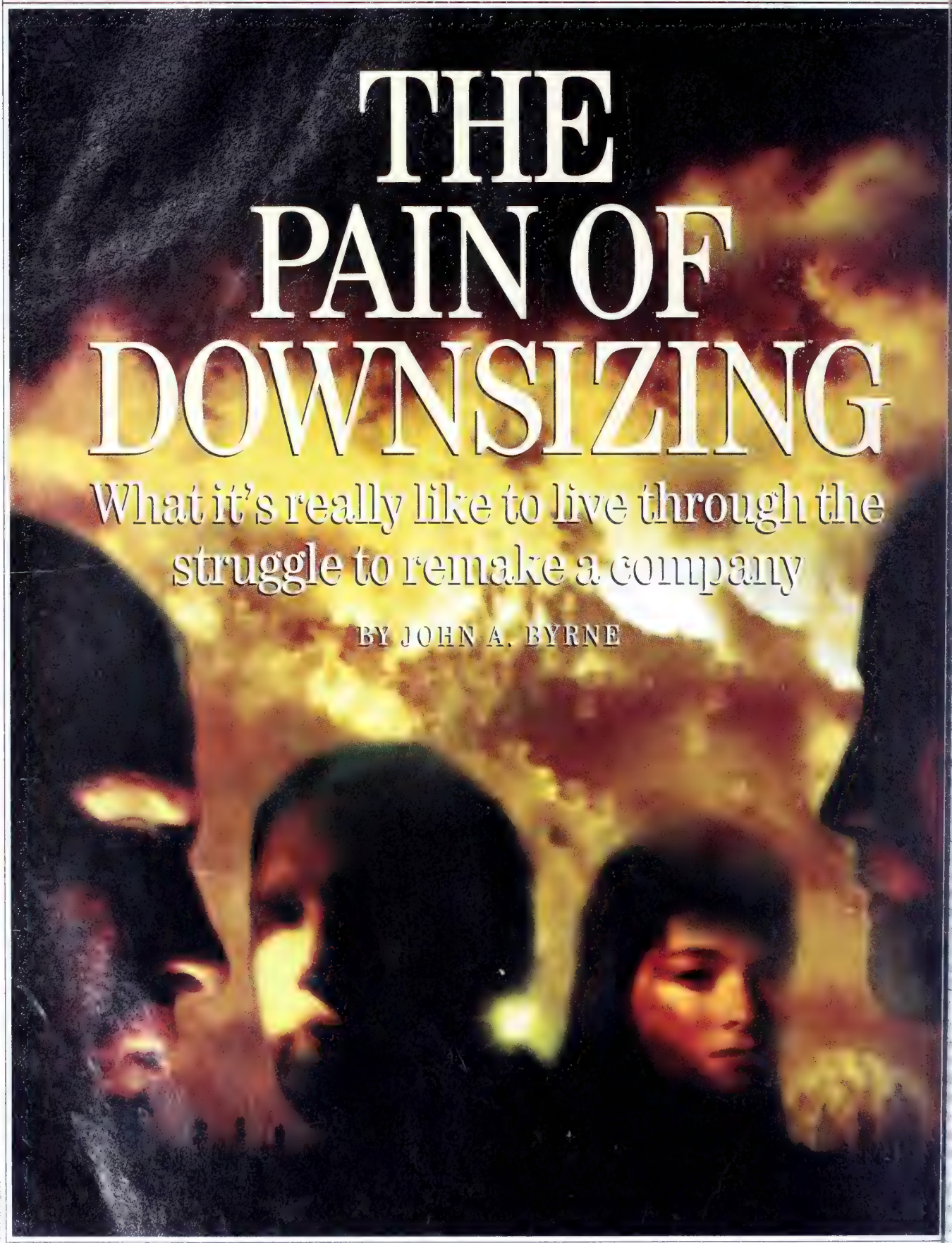
This is just a partial list of Information Age technology at work for people today. The true possibilities to tomorrow's network remain unfathomed. A truly interactive digital network will put powerful tools in the hands of creative people – and give them immediate access to an immense public. It will be a creative catalyst whose energy will change our entire society.

The process of creating such networks has begun and will continue for years to come. Telephone companies are working to streamline their operations and improve time-to-market while maintaining network quality. CATV companies are expanding their technology base and financial resources, while retaining their entrepreneurial edge. And wireless companies strive to expand their cellular service base while exploring PCS technology.

The infancy of the Information Age is being played out against a tumultuous background of change involving technology, corporate requirements, residential services and, above all, competition everywhere and eventually for everything.

The consumer – both in business and at home – will reap the rewards of that competition: greater choice in service options, more pricing flexibility and easy access to more information and entertainment than most people can currently imagine.

Want to see the Information Age? Look around, right now.



THE PAIN OF DOWNSIZING

What it's really like to live through the struggle to remake a company

BY JOHN A. BYRNE

MATT MAHURIN

The bombshell fell last summer in the guise of a videotape. It was one of those slick, corporate "news" programs for employees, the kind that typically delivers some feel-good message.

Not this one. It featured a fidgeting Nynex Corp. execu-
e who insisted that the profitable com-
ny needed to slash its operating bud-
t by up to 40% to remain competitive.
e upshot: another downsizing that
uld eliminate 15,000 to 25,000 people
m the payroll. That meant more than
e in five employees would lose their
s. The survivors of earlier cutbacks
ed foul, while management soberly
ed to justify the employee meltdown.
This is the tale of what has been hap-
ning at Nynex in the wake of that
attering announcement. It's the sto-
of a flabby company in the midst of a
rgantuan effort to remake itself, re-
ce costs, improve customer service,
d prepare for an onslaught of more
gressive competition in the years
ead. But it is also a wrenching hu-
n drama. The players: a dynamic,
ely executive leading the effort; an
side consultant whose firm is billing
company $1 million a month to help
h the downsizing; a thoughtful survi-
; and a resentful victim. In unusually
ealing, introspective interviews, they
r an inside look at what it's really
to live through the painful process
t has become a central fact of corpo-
e life in the 1990s.

GRY AND BITTER. Like many big cor-
ations, Nynex has been shrinking
years. Since 1990, the company has
itself of 19,200 employees out of a
l of 95,400, including 13,000 manag-
. In pure percentage terms, this lat-
cutback is one of the largest ever
orted by a major corporation. The
pany made its plans official on Jan.
by taking a $1.6 bil-
charge to earnings
ut 16,800 employees,
22% of its workforce,
r the next three
's. Two months later,
ex acknowledged
cutbacks would cost
dditional $1.3 billion
harges for severance
ns more acceptable
nion leaders.
ven though the com-
y hopes to avoid
ed layoffs by entic-
employees to accept
out offers, many
Nynex managers are angry and bitter. "Two months ago, I would have said that morale was low and it couldn't go any lower," says one executive. "But I'd have to say it's even lower today." Adds a former manager: "The top executives are willing to sacrifice people to make their bottom line on a quarterly basis. In the long term, they are selling the corporation out."

The drama now playing out at Nynex is being enacted at many other corporations. Despite the economic recovery, massive downsizings continue at one brand-name behemoth after another. Rarely a week passes without the announcement of yet more cutbacks, in what has become the most unsettling and disruptive event in Corporate America. In a quest for efficiency, companies have been charging billions of dollars off their earnings to lay off hundreds of thousands of workers. The current euphemism is "reengineering"—a bloodless term for corporate bloodletting on an unprecedented scale. In the year's first quarter, employers announced an average of 3,106 cutbacks per day.

The sight of so many bodies on the corporate scrap heap is sparking a complex debate—about profits and loyalty, and about the benefits and unforeseen consequences of layoffs. Critics, including some prominent executives, believe massive downsizing has become a fad, a bone to throw Wall Street when investors begin baying for cost-cuts. Others maintain that large-scale staff reductions, even at profitable companies such as Procter & Gamble Co. and Xerox Corp., are necessary to maintain competitiveness in a fast-changing global marketplace.

HARD CHOICES. Few observers expect an end to the spate of downsizing announcements. "In many large companies, we still see tremendous fat," says Noel M. Tichy, a management professor at the University of Michigan. "Yet there still remains this naive view that as the economy continues to take off, these jobs will come back. That's nonsense."

Tichy and others believe that recent gains in productivity—which rose at a 4% rate in the last half of 1993—are largely the result of these employee meltdowns. What the statistics of efficiency don't measure, of course, is the costs in emotional trauma to laid-off workers and their families, to the executives who often carry out the orders, or to the less secure survivors in dramatically changed organizations.

Today's corporation is no longer a secure or stable place. It's an uncertain, turbulent environment where managers often find their compassion and humanity in conflict with the pressures of competition and ambition. Fear is almost palpable in the corridors of the reengineered workplace, where loyalty takes a backseat to survival and personal advancement.

The events unfolding at Nynex are unique, colored by the company's own culture, traditions, personalities, and politics. But they're also universal: They exemplify the challenges and the pain that face both healthy and troubled organizations everywhere.

JOB DEATH: 25 LARGE DOWNSIZINGS

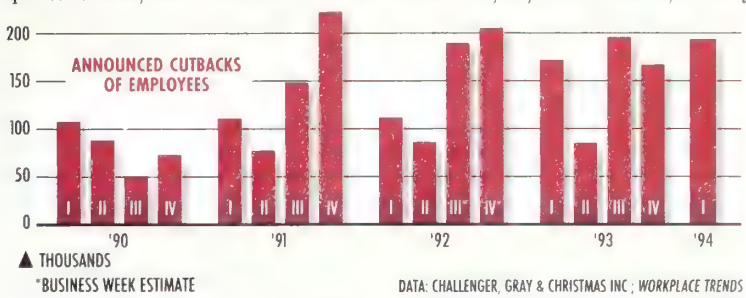
In a quest for efficiency and survival, many of America's corporate behemoths have been shedding employees at unprecedented rates. Here are 25 of the largest announced staff reductions since early 1991:

Company	Staff cutbacks
IBM	85,000
AT&T	83,500
GENERAL MOTORS	74,000
U.S. POSTAL SERVICE	55,000
SEARS	50,000
BOEING	30,000
NYNEX	22,000
HUGHES AIRCRAFT	21,000
GTE	17,000
MARTIN-MARIETTA	15,000
DUPONT	14,800
EASTMAN KODAK	14,000
PHILIP MORRIS	14,000
PROCTER & GAMBLE	13,000
PHAR MOR	13,000
BANK OF AMERICA	12,000
AETNA	11,800
GE AIRCRAFT ENGINES	10,250
McDONNELL DOUGLAS	10,200
BELLSOUTH	10,200
FORD MOTOR	10,000
XEROX	10,000
PACIFIC TELESIS	10,000
HONEYWELL	9,000
U S WEST	9,000

DATA: PEOPLE TRENDS

THE RECESSION IS OVER, BUT DOWNSIZING ISN'T

Corporate America announced 615,186 layoffs last year—a new record. Even in the midst of an economic recovery, big companies continue to shed workers. In the first quarter of 1994, announced staff reductions totaled 192,572, or more than 3,100 a day.



DATA: CHALLENGER, GRAY & CHRISTMAS INC.; *WORKPLACE TRENDS*

PHOTO ILLUSTRATION BY MATT MAHURIN

THE COST-CUTTER

HE'S GUTSY, BRILLIANT, AND CARRIES AN AX

Behind every major downsizing there is a person who leads the effort, and in so doing becomes both leader and scapegoat. At Nynex, it's Robert J. Thrasher. He's a tough-minded, 51-year-old executive vice-president with a history of breaking the rules.

At 5 feet, 3 inches, Bob Thrasher is a compact, muscular bundle of frantic energy—"a bionic gerbil," he jokes. Thrasher is always pacing, always talking at high-decibel level. And he's completely committed to the company: Divorced from his physician wife, he typically arrives at his office at 6:45 a.m. and leaves at 7 p.m. He can't remember a Sunday in the past 20 years when he hasn't worked at home or in the office.

Thrasher would surely prefer to be known as the "agent of change." Instead, the executive who nervously announced the impending layoffs on that in-house video has been branded the "corporate assassin"—the person responsible for the plan to eliminate 16,800 jobs. His critics—and there are many of them—would say that he has ice water in his veins and a pocket calculator for a heart.

> "This is tough, ugly work. The stress is palpable. I'm vilified throughout the company.... That's a tough thing to carry around"
>
> Robert J. Thrasher, Exec. V-P, Nynex

Since Nynex announced its downsizing, he has had to disconnect the answering machine at his Stamford (Conn.) home because every evening it was filled with obscene messages and threats from anonymous employees. Colleagues dub him "Thrasher the Slasher." In that same employee video, an interviewer wryly noted that he was running "unopposed as the top management SOB."

A former Air Force captain in a tactical fighter group, Thrasher insists that the tough choices he's now making are inevitable. "I know this is the right thing to do," he says. "Today, we have a virtual monopoly, but the states are in the process of opening up their markets. We have to improve service and reduce costs to stay competitive."

That realization, says Thrasher, came in mid-1992, during long-range planning discussions when he was chief operating officer of Nynex' New York Telephone unit. Top management concluded that if it continued to run the business the same way, the company's costs per access line would keep increasing even as revenues steadily declined.

Thrasher was relieved of his COO job to head the effort to reinvent Nynex. Why him? Many companies, from IBM to Westinghouse Electric Corp., have sought outsiders to lead their attempts at transforming themselves. Thrasher, by contrast, is the consummate insider. He joined the company as a construction foreman in 1965, fresh out of Massachusetts Institute of Technology, where he earned a graduate degree in structural engineering. The job was in his blood: His late father was a foreman for the Niagara Mohawk Power Corp. And what would he have thought of what his son is doing now? "My dad would have thought I'm breaking a social contract we have with our employees," Thrasher says—but then dismisses the notion. "That's the monopoly mind-set."

No one would ever accuse Thrasher of being a Bell-head, the sort of cautious bureaucrat who found shelter in the highly regulated embrace of the mother of all utilities. If anything, several associates describe him as "crazy" because of his gutsy candor and his irreverence for authority. As general manager of the company's Long Island unit in the mid-1980s, he transformed what had been one of the most troubled operations with horrendous service into one of the best. He didn't worry about bruising feelings. "In the first six months," boasts Thrasher, "I reassigned, furloughed, and forced-retired half of the senior management team there."

It was that sort of hardheadedness that made him a natural for the companywide reengineering effort. "There

was no other choice than Bob Thrashe says Ivan G. Seidenberg, president Nynex. "He has enormous energy, co mitment, and passion for the compa He's relentless."

WEEKEND HUDDLE. Thrasher wanted examine the company not by division, department, or function. Instead, planned to analyze the company by four core processes, which cut acr the $13.4 billion corporation: custon operations, customer support, custon contact—i.e., sales and marketing—a customer provisioning, that is, the pl ning, design, and building of Nynex' n work. He created four teams, with

JEFFREY LOWE

ndpicked captain for each. After ending three days at GTE Corp. to get inside look at its reengineering ef- t, he hired GTE's consultants, Boston nsulting Group Inc. (BCG), to help with process at Nynex.

By late March, 1993, at a weekend eting at the Stouffer Westchester Ho- in White Plains, N.Y., he put his ms together with the consultants and l his incredulous audience what he nted: a 35% to 40% reduction in op- ting expenses. The teams, with 80 nex insiders and some 20 BCG con- tants in total, dispersed and rushed ough the bureaucracy observing all its key operations. They visited 152 "best practice" companies, from Avis Inc. to Virginia Power & Light, looking for useful ideas.

Back home, the inefficiencies they discovered shocked all of them—most of all Thrasher. Among many things, he learned that Nynex bought 83 brands of personal computers a year; that dozens of New York Telephone Co. employees spent their time repainting newly purchased trucks a different shade of white at a cost of $500 a truck; that Nynex spent $4.5 million to find and bill only $900,000 in previously unbillable telephone calls. There was plenty more. "Think of how embarrassed I was," says Thrasher. "I ask myself how I could have presided for two and one-half years over an operation that has been that screwed up."

His teams first came up with a list of 85 "quick wins"—easy fixes to make. By printing on both sides of customer bills, for example, the company will save $7 million a year on postage costs alone. By standardizing on only two personal computers, Nynex could save $25 million in annual capital outlays. And then, in November, came the more substantive recommendations that would lead to the massive layoffs.

All told, the four teams compiled more than 300 specific changes, from consolidating work centers to simplifying procedures for approving customer service. Change doesn't come free, however. Thrasher initially estimated the moves would cost $700 million in expenses and $400 million in capital. But by 1997, the changes will cut $1.5 billion to $1.7 billion from the company's $6 billion in operating expenses.

HUGE RETURN. On three consecutive days last December—"the most excruciating days of my life"—he made presentations to the directors of three boards at Nynex and its operating subsidiaries, New York Telephone and New England Telephone. He did something that would make any executive cringe: He asked the directors to swallow a record $1.6 billion charge against earnings and to make wholesale cuts from the payroll.

The slide that cinched the decision contained the prediction that all of Thrasher's fixes, if implemented, would generate an internal return of 1,025% and a payback on investment in two years. Thrasher told directors that if his teams could achieve only 25% of their goals, they would see a 226% return and a three-year payback. But those estimates didn't reflect the sharp increase in the actual cost of cutbacks, which has grown from $700 million in January to $2 billion two months later as a result of union negotiations.

Although he got approval to move forward—some 950 people are working to implement the changes—Thrasher still meets resistance. "Some of our senior management still don't get it," he says. "What we've got to do is find them and get them out of the business."

That's tough talk. "This is tough, ugly work," says Thrasher. "The stress is palpable. I'm vilified throughout the company. People look upon me as the principal to the downsizing. That's a tough thing to carry around. Hell, I'd like not to downsize a single employee. But that would not be a prudent decision to make."

Continued on page 66

When you were a kid you made yo
Maybe this is the year you r

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a promise. good on it.

So you never hit one out of Yankee Stadium, or headlined at the Garden like you planned. You can still drive a Corvette. And it's even more fun than you imagined it as a kid.

Because today's 'Vettes have 40 years' worth of Chevy engineering breakthroughs: The LT1 engine, one of the world's most advanced small-block production V8s. Dual air bags. The union of Bosch ABS brakes and ASR traction control. And no other Corvette has a cockpit quite as refined as this year's.

So, even though you've wanted a Corvette for as long as you could reach the accelerator, it's probably a good thing you waited until now. Because the 1994 Corvette is the best one yet.

Chevrolet Corvette

THE CONSULTANT

A DENTIST WHO ONLY DOES ROOT CANALS

For Phillip B. Catchings, the Nynex assignment has been the most challenging and difficult of his consulting career. As a partner at Boston Consulting Group, Catchings is the day-to-day leader of the consulting project that is costing Nynex $1 million a month. If BCG stays at Nynex until the job is done, the total bill could reach nearly $40 million.

Like Thrasher, he's hardly a popular figure at Nynex these days. For one thing, employees have seen their share of high-priced consultants come and go. "Nynex is a champion at spending millions of dollars on consultants and doing nothing with the results," grouses one manager.

Besides, every time Catchings begins a consulting assignment—and he has done about 45 so far—he is typically met with cynicism. "There is some natural resentment when we come in," he says. "People ask, 'What makes you guys so smart?' and 'Why doesn't top management trust us to do this ourselves?'"

His job, he says, is to allay such fears—but he can't do so by pretending that his remedies will be painless. "A dentist who claims a root canal is not going to hurt will lose his credibility," he says. "I am here to do the best possible job for the organization."

Above all, of course, Catchings' presence provokes shudders because he is a *memento mori* in pinstripes. His arrival at Nynex or anywhere else usually means layoffs ahead. In half of his past 10 assignments, he has been part of a retrenchment effort. Yet his background hardly seemed to have prepared him for his role as the hardheaded, coldhearted consultant. After graduating from Dartmouth College in 1973 with a degree in psychology, Catchings ran a foster home for delinquent teenagers. He grew a beard and long hair, bicycled across the country, and studied pottery in Washington state. The wanderlust out of his system, he spent five years in human resources with AT&T, then headed to Harvard B-school. He graduated with his MBA in 1982 and went straight to BCG.

Like most consultants, he's afflicted with jargon. Catchings, 42, speaks of "crafting process platforms" and "de-a eraging costs," of "optimum solutio and "phase-one diagnostics." He conced that his family is often disappointed wi his inability to tell an anecdote abo his work. "I must have a confidentiali filter on my brain," he says.

Along with partner Jeffrey A. Bo den, Catchings first consulted for Nyn and Chairman William C. Ferguson 1989. That established a relationship th led to the current assignment. Cat ings, whose expertise is mainly "change management," has spent 80% his 55-hour workweeks at Nynex sin late 1992. Bowden, a telecom expe was already spearheading a similar fort at GTE that will claim 17,000 jobs

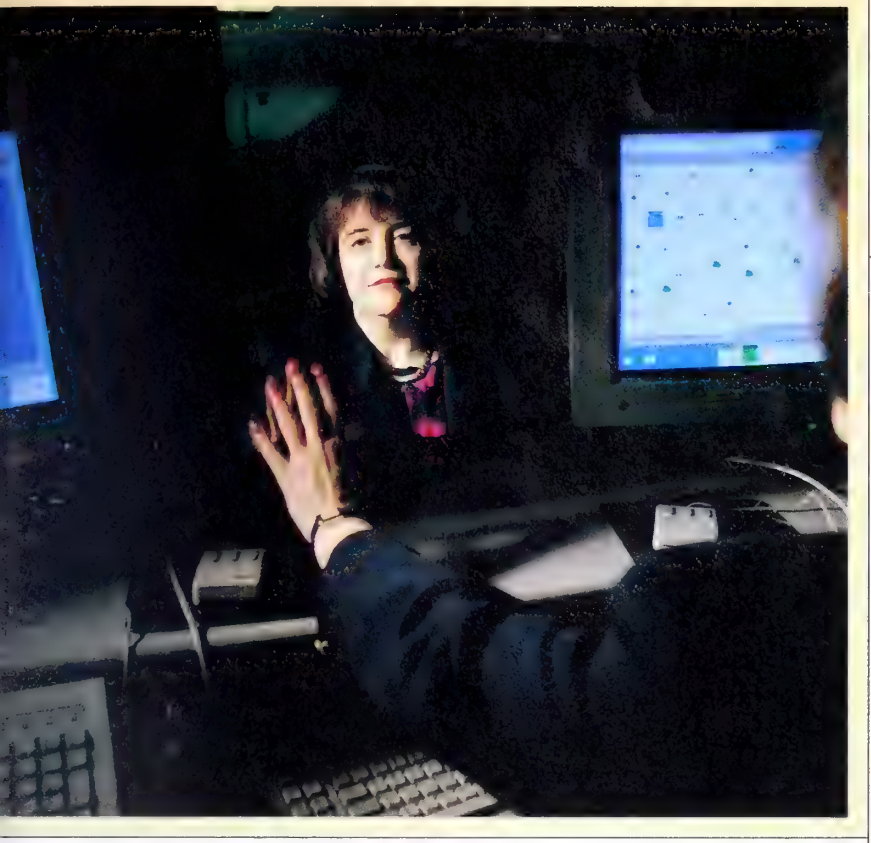
SCRIPTWRITING. The consulting pair hu dled with Thrasher and other top exe utives once a week for four month mapping out the project. By ea March, Thrasher had picked his captai for the teams; Cat ings and Bowden a sembled two-dozen B consultants. Their ro write the script for t reengineering exerci and guide the effort.

A "compendium" several hundred pag detailed the projec five major phases, fr "direct process obser tion" in the first fo months to "broad sc implementation," whi is now under w Catchings and Bowd helped to select t companies that tea visited for inspirati and ideas. After ea trip, teams engaged so-called clay-modeli sessions in whi lessons from the vis were molded into r ommendations.

Now, Catchings m get on with the pain task of building t new structure and he ing to make the st reductions that will tail. How does he r oncile himself to the job of helping o ers wield an ax to people, their caree and families? "I try not to focus on th aspect of it," he says. "I'm also part taking a frustrated, comparatively u successful 70,000 employees and tra forming their environment so they c be more productive. I think I'm involv in saving lots of jobs, not destroyi them."

"People ask: What makes you guys so smart? Why doesn't top management trust us . . . ?"

Phillip Catchings, partner, BCG



THE SURVIVOR

STAYING POWER HAS REWARDS—AND A PRICE TAG

Nancy P. Karen, 46, is pretty sure her job won't be destroyed. In her 24 years with the company, she has been an energetic worklic in the critical area of information ems. As director of the company's sonal-computer network, Karen is ng new and tougher demands as a ılt of Thrasher's efforts.

he joined New York Telephone in) during the company's big bulge in ng, often referred to as "the service ." To meet explosive growth, the pany hired tens of thousands of peo- in the late 1960s and early 1970s. en, a Vassar College graduate with a ree in math, was one of 103,000 em- ees at New York Telephone in 1971. ay, NYT has about 40,220 people. king in a regulated monopoly, she a sense of comfort and security that seems a distant memory. "Down- ıg was totally unheard of," she says. t about everybody here started with company at a young age and retired he payroll."

Thrasher's plan—and Nynex' earlier efforts to slash the payroll—have changed all that. Of the 79 people who report directly to Karen, 59 have already seen colleagues forced off the payroll in previous rounds of cutbacks. Her department is likely to suffer a 30% reduction in staffing. "When they started talking about another round of downsizing, people were a little more anxious because they feel they're already stretched thin. Now we'll have to learn to work smarter and completely change the way we do things."

Working smarter also means working harder—much harder. She once directly supervised 26 people, instead of 79, and she used to work more normal hours as well. No longer. Karen now puts in 50 to 60 hours a week, from 8 a.m. to 7 p.m. every weekday, at Nynex' White Plains (N.Y.) office. Wherever she goes these days, she carries a beeper and a cellular phone and checks her voice mail every hour. "It's a different mentality," she says. "My weekends and holidays are not reserved." On a recent biking vacation through California's wine country, she called the office at least once a day from "every little town." Since Karen is single, "nobody complains about my work hours," she says.

> "Now we'll have to learn to work smarter and completely change the way we do things"
>
> Nancy Karen, Dir., Nynex PC network

Nynex didn't push Karen into her new and grueling pace completely unprepared. The company dispatched her to the local Holiday Inn in early 1993 for a workshop on culture change put together by Senn-Delaney Leadership, a Long Beach (Calif.) consulting firm. She was skeptical at first. "To me, it was yet another program," she says.

Surprisingly, Karen left a believer. The sessions—dubbed Winning Ways—are an effort to inculcate the new values and skills that Nynex believes it needs to make Thrasher's reengineering changes take hold. It's a quick-and-dirty roundup of today's managerial commandments, stressing teamwork, accountability, open communications, respect for diversity, and coaching over managing.

Although impressed by how the sessions encouraged employees to speak more freely to each other, Karen saw her share of nonconverts at the initial two-and-one-half-day meeting. "Some people come back to work unchanged," she says. "But there's a big middle section that seems willing to change, and then there's a small percentage at the top that's very enthusiastic about it."

BRAIN DRAIN? Not that Karen, who earned an MBA from Columbia University on the company's tab in 1981, doesn't have some big worries about the change effort. One of them is that the downsizing will get ahead of the company's ability to figure out ways to get the work done more efficiently. She's also worried that the company will lose expertise and talent. That would mean that she and other managers won't have enough of the right people to accomplish the tasks placed before them. "It's not going to work perfectly," she says. "There will be cases when the downsizing occurs before the reengineering."

Despite the increased workload and her concern over employee morale, Karen considers herself lucky. "This is a wonderful challenge," she says. "I'm looking at a task of building a new organization in the next six months to a year. I have the chance to test myself as I've never been tested before."

THE VICTIM

THE LIVING HELL OF LIFE ON THE FIRING LINE

Not everyone shares Karen's optimistic view of life at Nynex. Uncertainty and fear loom over many. Only two weeks ago, Nynex began sending out details of the buyout packages to some workers in New England. Employees know that if enough people refuse the package, the company will be forced to push them out.

Many are understandably bitter. They feel as if they are victims of some abstract management exercise beyond their control or even their capacity to understand. One of them, an urbane manager with more than 20 years of experience, expects to pounce on an early-retirement package, to walk out, and start a new phase of life. "This company's values have changed," the manager says. "There are now right people and wrong people here, and I don't believe in that."

Fearful of retribution, this employee doesn't want to be identified. But Pat, as we'll call this middle manager in a staff position, is remarkably candid about the turmoil inside the company. Pat has made presentations before Bob Thrasher and thinks he's a "brilliant, if ruthless, executive. As an officer of the company, he's very focused and clearly sees the possibilities." But this Nynex veteran doesn't see Thrasher and other top managers sharing the pain. "The officers all have golden parachutes. They're in charge of their own fates. We're not involve We're just affected."

> "The officers...are in charge of their own fates. We're not involved. We're just affected"
>
> Pat, a middle manager in jeopardy

Looking at the fate of the manage and employees who lost their jobs Nynex' earlier cutbacks, Pat can see th profound changes that may lie ahea Many are still without work. More tha 150 of them have joined a class actio against the company, alleging that the were selected for dismissal because age discrimination.

Although the company formally a nounced its latest round of cutbac three months ago, not a single employ has yet lost a job. Details of buyout o fers, including accelerated pensions, a being sent to employees in selected bu ness units. Thrasher says the buyo offer "removes the anxiety and angst the workforce."

Not to this middle manager, who b lieves offering incentives to quit isn that much different from terminati employees outright with severance pa "Even if people won't be fired this tim they're still frightened of the future. affects their self-esteem and their poc etbook. And most people aren't goi from something to something. They ha no place to go."

VALUES LOST. Sure, Pat fears for a j that may be lost. But mostly, Pat clai to fear that the company to which th middle manager's professional life h been devoted will never recover fro the bloodletting. Pat recalls taking hou to walk to work in the aftermath o major snowstorm—a degree of comm ment employees won't be likely to feel the future. This manager wonders if t repairmen who now rush to set up em gency communications lines at the sce of incidents such as the bombing of t World Trade Center will move less gently because of Nynex' perceived la of loyalty to its employees. Corpora values that not long ago focused on c ing for employees have been rewritten that now employees come last, Pat sa after shareholders and customers.

The Draconian downsizing, Pat lieves, is really a knee-jerk response t complex set of problems that might addressed more subtly. "Other com nies, like Hewlett-Packard, have re cused their strategy, cleaned up th product and service lines, and for t most part retrained their folks witho massive layoffs, and they're doing ceptionally well."

Such humane options, however, m be for executives and companies th don't have to cut as deeply or thoroughly as Nynex. As everyone volved would concede, the pain of t massive downsizing isn't likely to away anytime soon.

Commentary/by John A. Byrne

THERE IS AN UPSIDE TO DOWNSIZING

Next to the death of a relative or friend, there's nothing more traumatic than losing a job. Corrate cutbacks threaten the security d self-esteem of survivors and vicns alike. Layoffs disrupt careers and milies. They cause turmoil and shatter e morale inside organizations. And ey confirm the public's view that profs always come before people.

So it comes as no surprise that when nsulting firms survey human resource xecutives about recent downsizings, ey find some negative results. Indeed, udy after study appears to prove that e downside of downzing often outweighs y savings the cutcks produce. Manement underestiates the costs to slash rkers and the impact tbacks have on the rale of survivors. eople become preoccpied with layoffs," ys John J. Parkingn, a consultant with yatt Co., which pubhed a downsizing dy last year. "People end more time on inrnal politics. They bene less productive."

D PRESS. In truth, wnsizing has gotten nething of a bum). Parkington's own dy shows that 77% the executives Wysurveyed believe t restructuring had a positive imt on productivity. Only 13% considd the impact adverse. Sure, morale fered in the short term. But the od does pick up, especially when cutks are combined with efforts to bust bureaucracy. Other benefits from vnsizing cited by the survey's rendents: enhanced quality and cusner service and greater willingness ong survivors to take risks, perhaps ause of accompanying efforts to enrage them to be more venturesome. Yet another survey by the American nagement Assn. last year claimed t downsizing's "goals of increased fits and greater productivity conne to prove elusive." The survey hered these views, however, from nan resource managers, who are far more likely to view cutbacks in a highly negative light. And even the human resource managers said profits declined at only one in five companies downsized since early 1988.

Another study by three professors at the University of Wisconsin also generated bad press for layoffs. The report contends that a company's financial performance worsens two years after the announcement of a downsizing. Although there's often a short-term advantage to layoffs, any gains in profit margins and return on equity disappear two years after the announcement.

THE REAL PICTURE

Study after study contends that companies commonly underestimate the costs of downsizing and often fail to gain the expected efficiencies. But the studies have their faults, too.

CRITICISM	REALITY
▶ Financial performance worsens two years after a company announces a massive layoff, according to a 1993 study by three academics at the University of Wisconsin. Though there is often a short-term advantage to downsizing, any gains in profit margins and return on equity soon disappear.	▶ This limited study of only 17 companies that announced layoffs in 1989 is hardly definitive. The authors reviewed 1991 financial results which were adversely affected by the recession. Many of these troubled companies would have been even worse off if they hadn't reduced costs through cutbacks.
▶ Fewer than half the companies that downsize meet the financial and operational goals they set for themselves, according to a 1993 study by Wyatt Co. Morale was hurt in 56% of the 531 surveyed.	▶ The report also found that downsizing led to such positive changes as improved productivity, enhanced quality and customer service, and a greater willingness among survivors to take risks.

Dig behind these headline-grabbing conclusions, however, and you find some remarkable information. The study is based on only 17 companies that announced layoffs in 1989. Because the authors chose to study companies immediately after they announced cutbacks, rather than after the layoffs took place, they give a distorted view.

Dig further, and you find that the authors' list of companies includes Digital Equipment, General Motors, IBM, and Unisys—troubled giants that are hardly candidates for quick turnarounds. "A lot of these companies are poorly managed concerns that got in trouble," says Noel M. Tichy, a management professor at the University of Michigan. "If they refused to lay off people, they would report bigger losses or go bankrupt." Concedes Kenneth P. De Meuse, one author of the study: "There may be a chicken-and-egg thing here."

In other words, there's no telling whether the deteriorating results are the consequence of the layoffs, or—as is more likely—merely the further playing out of the business woes that sparked the downsizing in the first place. Two years may not be long enough to see results. Indeed, if De Meuse and his colleagues had extended their period of review, they also would have found sizable rises in net income and profit margins at other companies in the study, including Boeing, Chrysler, Hewlett-Packard, Motorola, and Texas Instruments.

These companies are among those that have aggressively cut costs and changed the way work is done. When John F. Welch became chief executive of General Electric Co. in 1981, the company employed nearly 420,000 people. Today, some 222,000 are on the GE payroll, yet the company has tripled its net profits and more than doubled its revenues. "I know that GE made a bundle of money out of downsizing," adds Tichy, co-author of a book on Welch. "If you figure that each person with salary and benefits costs about $60,000 a year, that means GE has taken $18 billion out of its cost structure."

Make no mistake: Downsizing is hardly a quick fix. It is not a strategy, and it is not a panacea for poor management. Healthy companies that slash payrolls instead of devising new game plans for growth are sending a demoralizing message to employees. Massive layoffs should be avoided when possible through shorter workweeks, wage and hiring freezes, and cutbacks in executive perks. But the idea that downsizing can't sometimes be an effective way for bloated, uncompetitive companies to cut costs is pure nonsense.

Byrne is a senior writer covering management for BUSINESS WEEK.

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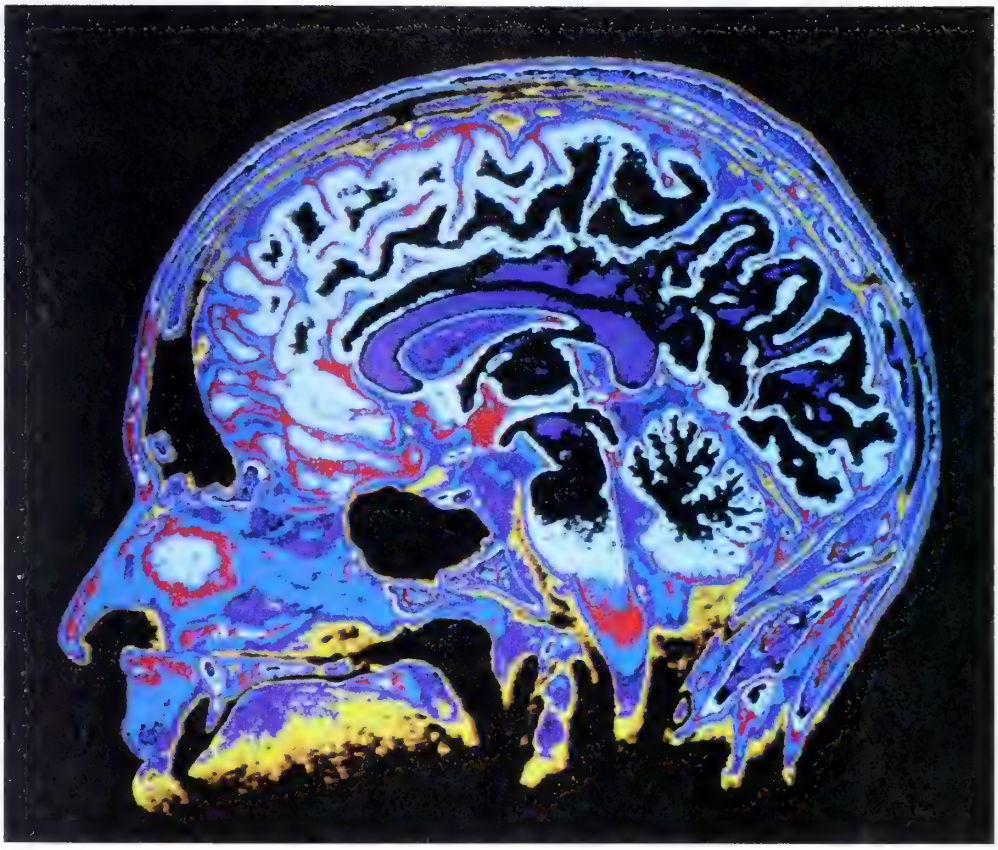

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A GAP STORE IN TORONTO: IN AN ONGOING SHAKEOUT, CANADIAN CONSUMERS WILL WIN

NORTHWARD, HO!

WAL-MART Converting 122 Canadian Woolco stores bought in March; first Wal-Marts open this summer.

HOME DEPOT Launched Home Depot Canada after buying 75% of 8-store Aikenhead's Home Improvement Warehouse chain in February. Goal: 50 stores in five years.

STAPLES Will take full control of the 3-year-old 32-store Business Depot chain this summer. The goal is to reach 100 stores in five years.

GAP Has grown from 34 stores in 1991 to 64 today, with more on the way.

PRICE/COSTCO Has opened 37 warehouse stores since 1985; plans to open 10 more this year.

INVASION OF THE RETAIL SNATCHERS

Wal-Mart, Home Depot, Gap, and other Americans storm Canada

While shopping for a dress for a wedding recently, Andrea Dean spotted just what she wanted in a downtown Toronto women's store. But Dean, a secretary with five children, had second thoughts when she saw the $133 price. So she headed off to Winners, an off-price store owned by U. S. retailer TJX Cos., parent of T. J. Maxx Stores. There she found the same brand-name dress marked down to $35. "I was thrilled," says Dean. With testimonials like that, it's not surprising that Winners outlets have been springing up like daffodils across Canada. Winners Apparel Ltd. now has 27 stores, up from 5 in 1990 when TJX acquired the chain, and plans to add 10 more this year.

That's just one example of a massive new invasion by U. S. retailers of the $150 billion Canadian market. To its Southern neighbors, Canada looks like a hot growth prospect. U. S. retailers' interest in Canada has been rising since the U. S.-Canada Free Trade Agreement took effect in 1989. Now, a combination of low real-estate prices and a falling Canadian dollar is setting off a land rush. The resulting competition is being welcomed by consumers. But it's sending a cold wind through Canada's recession-squeezed retail industry. By the late 1990s, "half of the Canadian retailers you see up here now may not be in business," predicts Canadian retailing consultant John Winter.

PEER PRESSURE. Many of the strongest retailers in the U. S. are staking their claim (table). In March, Wal-Mart Stores Inc. completed its purchase of 122 stores of Woolworth Corp.'s ailing Woolco unit in Canada. It was Wal-Mart's largest acquisition ever. The chain is now spending hundreds of millions of dollars gutting and renovating the stores before putting the Wal-Mart name on them later this year. In February, Home Depot Inc. spent some $150 million to buy 75% of Aikenhead's Home Improvement Warehouse from Molson Cos. This summer, the biggest U. S. office-products retailer, Staples Inc., plans to buy full control of Canada's fast-growing Business Depot. Meanwhile, stores owned by such companies as Gap, Talbots, Price/Costco, and Michaels Stores are spreading rapidly.

Canada traditionally has been "a protected market, lagging 5 to 10 years b hind" U. S. retailing trends, says Winte For Canadians, this has meant far hig er prices, less choice, and poorer cu tomer service. In Talbots' new Canadi stores, in contrast, clerks thank custo ers and ask if they would like their pu chases boxed, says Cathy Langdon, confessed shopaholic from Toronto. "Th is almost never done in Canada," s says.

Most of the new entrants are f ahead of Canadian retailers in buyi practices, distribution, and use of comp er technology. Factor in the economies scale gained through doing some pu chasing through their U. S. operatio and the Americans boast a significa cost advantage, industry experts s Home Depot Canada, for example, bu all its wares directly from manufacture instead of through distributors. Steph Bebis, president of Home Depot Cana figures that let the chain undercut co petitors' prices by 30% at first. Its riv have since dropped their prices, b Home Depot is still 5% to 10% lower.

U. S. retailers are also pressing th Canadian peers on service and selecti Each Home Depot store has 12 to plumbers, electricians, and other prof sionals to answer shoppers' questio Wal-Mart is hiring four people per st as greeters. Gap and Talbots are luri shoppers with sharp fashions. "Eigh percent of my friends are purchasi clothes at GapKids," Langdon says.

Wal-Mart's takeover of Woolco is t timony to U. S. retailers' appetite. W Mart is overhauling all 122 stores, tw

many renovations as it has ever done
a year. A team of 25 experts from
adquarters in Bentonville, Ark., is
ping the new Wal-Mart Canada adapt
erything from Wal-Mart's buying prac-
s to its state-of-the-art computer sys-
n. Top managers have been sent to
Walton Institute of Retailing to soak
Wal-Mart's legendary service culture.
ndustry watchers expect Wal-Mart
be Canada's largest retailer within
e years. Still, Wal-Mart executives
cede they face a huge task. Wool-
rth "hadn't invested any real money
he business since 1982," says Bruce
st, chief executive officer of Wal-Mart
nada, who was president of Woolco
the past 2½ years. While Woolco
ked as Canada's second-largest dis-
nter, after Hudson's Bay Co.'s Zellers
., "it had fallen way behind the
es," West says. Wal-Mart decided it
ldn't salvage Woolco's archaic, ineffi-
t distribution system: Its small ware-
ses could not handle Wal-Mart-style
ume. So the retailer has contracted
tribution to a Canadian unit of
tain's Tibbett & Britten Group PLC.
anwhile, Wal-Mart has been criticized
he Canadian press for slip-ups such
nailing "terms of employment" letters
English to its managers in French-
aking Quebec. "It was an error," ad-
s West, a native of Quebec.

ING PROBLEMS. This might seem like
sky time to be forging northward.
past three years "have been the
ghest for retailers since the 1930s,"
s Alasdair McKichan, president of
Retail Council of Canada. Winter es-
ates that a harsh recession and a
7% national sales tax slashed re-
spending 15% in real terms from
to 1992. About 10% of Canada's re-
rs went out of business. Spending
begun to pick up thanks to the eco-
ic recovery. But with unemployment
a sky-high 10.6%, consumer confi-
e is hardly buoyant.

addition, some of Canada's big re-
rs are getting more competitive.
425-store Canadian Tire hard-goods
n has shaken up its management
cut prices on more than 10,000
s. Similarly, the 242-store Consum-
Distributing hard-goods chain had
using a distribution system so cum-
me it was impossible to shift toast-
rom one store to another. Last year,
vitched, like Wal-Mart, to Tibbett
itten.

wever the battle shakes out, Cana-
consumers will be winners. "They'll
more merchandise for less," says
Mart's West. Andrea Dean can't
As competition forces down prices,
ill help our family a lot," she says.
ns of Canadians no doubt agree.

By William C. Symonds in Toronto

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WOLFGANG FLOTTL'S NETWORK OF SHADOWS

The financier's rumored losses are sending ripples from Vienna to the Caribbean to Wall Street

To his New York society friends, Wolfgang Flöttl is just another well-heeled up-and-comer. Born in Austria, he is married to Barbara Anne Eisenhower, the granddaughter of President Dwight D. Eisenhower, and attended Richard M. Nixon's funeral. He has an eight-acre spread called Castle Point in Tucker's Town, in an exclusive Bermuda billionaire's enclave where his neighbors are Ross Perot and Italian media mogul and Prime Minister-elect Silvio Berlusconi.

WOLFGANG AND BARBARA ANNE EISENHOWER FLOTTL

A former Kidder, Peabody & Co. vice-president, Flöttl, 38, drives a $229,000 Lamborghini Diablo and motors a $700,000 speedboat named Barbara Anne of Hamilton, according to *The Bermuda Sun*. He is developing the tallest building in downtown Hamilton, Bermuda, in partnership with Sir John W. Swan, the British colony's Premier. Employing public-relations advisers to speed his social aspirations, Flöttl has contributed to New York's Metropolitan Museum of Art and American Ballet Theatre.

FUTURES SHOCK. Some Wall Street firms see Wolfgang Flöttl in a very different light. To them, he is a potential liability. An aggressive and extremely secretive investor, Flöttl apparently has been making huge market bets. Although hard information about Flöttl is scarce, rumors abound on the Street that his sprawling Bermuda-based trading empire has suffered some serious losses in the first quarter of this year because of the sharp increase in interest rates, an event that battered many other professional traders. Those losses came on the heels, say Street sources, of large profits of $575 million in 1992 and $750 million to $1 billion in 1993.

The most recent rumors link Flöttl to large sales in mid-April of Japanese futures, German and French bonds, and other sovereign debt. "There is a large liquidation going on and the Street thinks it's him [Flöttl]," says a hedge fund trader.

Some Street firms with which he has traded now are reexamining their exposure to Flöttl and whether to continue trading with him. But Flöttl still has friends on Wall Street, including Bear Stearns, Morgan Stanley, and Nomura Securities International. "We've done business with him for six and a half years, and its been a joy and a pleasure. We would like to have other clients like him," says Bear, Stearns & Co. Chief Executive Alan C. Greenberg. Morgan and Nomura declined comment.

Representatives of Flöttl won't comment on his profits or losses but say that Ross Capital Markets Ltd., his chi investment vehicle, is "highly liquid" a "very well capitalized." And they insi that none of the Street firms where does significant business has pulled cre it lines from Flöttl.

Possible losses aren't Flöttl's on problem. Recent articles in the Austri press have uncovered a close financ relationship between Flöttl and his ther, Walter Flöttl, chairman of the Vi na-based Bank for Labor & Busine known as BAWAG. Owned by Austri labor unions, BAWAG had been consi ered Austria's most conservative ban Yet Walter Flöttl, through BAWAG, h invested hundreds of millions of doll in offshore companies affiliated with son, a relationship Walter Flöttl has denied. The money, Austrian publi tions say, was put in often risky, specu tive investments, which Flöttl senior nies. Austrian authorities are investig ing whether the bank took undue ris

The most recent stories in the A trian press claim Wolfgang Flöttl n

es BAWAG $1.7 billion, with some $400 ion in loans extended this year alone cover margin calls on leveraged in- tments when the bond market turned n. The publications say Flöttl's appar- securities liquidations stem from VAG's effort to retrieve the banks' ds from Flöttl's Caribbean entities. 'löttl's representatives deny these orts. In a recent letter to BAWAG, ttl said that because of "scurrilous acks" in the press, he was ending lings with BAWAG. Flöttl's representa- es insist that by the first week in y, Flöttl will have terminated all out- nding BAWAG transactions and the k will have retrieved all the cash anced to Flöttl's entities. "The bank n't have any investments—structured advised—by Ross or Wolfgang," say ttl's representatives.

OOD FORTUNE." By all accounts, fi- cial help from his father and BAWAG s crucial to Flöttl's investment suc- s. Flöttl obtained degrees from Vien- University, the London School of nomics, and Harvard business school, spent six years with Kidder in inter- ional corporate finance. But when he Kidder in 1987 to trade indepen- tly, he had very little capital of his n.

Representatives of Flöttl acknowledge e initial assistance from BAWAG, but ct him as a highly skilled investor an almost uncanny ability to play ket cycles. In the late 1980s, they he scored repeatedly in risk-arbi- e bets on takeover deals. When the business cooled, Flöttl moved into developed-country debt, picking up :e credits on the cheap and selling with big gains. More recently, they say, he has been rolling up big profits with U.S. government bonds and foreign sovereign debt. "I've always looked at the relationship as an accommodation to the bank, where the bank had the great good fortune to hook up with a sophisticated investor," says Theodore Altman, an attorney for Flöttl. "Wolfgang helped them get into the capital markets and had enormous success."

Austrian regulators may not see it that way. Traditionally, BAWAG remained consistently profitable by spurning such fads as foreign lending and sticking to mortgage loans to individuals. But in mid-April, the Austrian magazine *News* published a document purporting to show that BAWAG had loaned at least $330 million to Ross Capital, a Bermuda-based trading company owned by Flöttl. Subsequent reports in another Austrian magazine, *Wirtschaftswoche*, said that by the end of last year, BAWAG had funnelled as much as $1.7 billion to Flöttl through some two dozen companies affiliated with Flöttl on various Caribbean islands. That amount exceeded the bank's core capital, *News* said. The investments carried interest of LIBOR (London interbank offered rate) plus 5%—high even for risky deals. Walter Flöttl has claimed that these investments were riskless because they were fully secured.

Flöttl's representatives say BAWAG most recently invested in some 25 offshore companies affiliated with Flöttl, which held securities similar to collateralized bond obligations. Structured specifically for BAWAG to carry a very low risk, they were secured by U.S. government and other sovereign debt. Flöttl's representatives will not comment on the size of BAWAG's investment, but they claim BAWAG received only LIBOR plus 2% on most of their investments.

The bank's relationship with Flöttl was apparently very remunerative. It accounted for about a quarter of BAWAG's annual earnings over the past six years, making BAWAG Austria's most profitable bank, with a 1993 operating profit of $168 million.

At times, according to *Wirtschaftswoche*, BAWAG has shielded profits for political reasons. For instance, BAWAG, through Flöttl's offshore subsidiaries, invested massively in the RJR Nabisco takeover battle in 1989, making a profit of $250 million to $300 million. But BAWAG did not want to declare this profit, which would have incurred a 40% tax rate and produced a sudden jump in earnings that would have pressured the bank to declare a special dividend. Just as important, the bank feared it might have seemed inappropriate for a trade union bank to profit from a takeover battle. Thus, Flöttl kept the money parked in overseas subsidiaries, funneling it back to the bank in the form of high-interest loans. Flöttl's representatives do not dispute this explanation.

Flöttl's dealings with BAWAG have enabled him to create a secretive empire of almost overwhelming complexity. His main company in Bermuda is Belforte Group Holdings Ltd., according to his representatives, which owns Ross Capital Markets, his main trading vehicle. Other affiliates include Pembroke Co., EBT Securities Ltd., and European Bank & Trust.

Flöttl's main U.S. arm is Normandy Asset Management, which has offices in midtown and downtown Manhattan and Greenwich, Conn. Normandy runs some of Flöttl's money but the company is not owned by Flöttl, says a Flöttl representative. It is primarily owned by Edward Dalidowicz, a trader and a close associate of Flöttl, say the representa-

RESUME

Name: Wolfgang K. Flöttl
Born: Austria
Age: 38

Education: Harvard business school; London School of Economics; JD, Vienna University

Career: Vice-president with Kidder Peabody & Co. from 1981 to 1987; now head of his own far-flung, Bermuda-based trading and investment empire

Companies: Belforte Group, Ross Capital

Wife: Barbara Anne Eisenhower, Ike's granddaughter

DATA: BUSINESS WEEK

WOLFGANG FLOTTL'S BERMUDA-BASED COMPANIES WERE FINANCED IN PART WITH FUNDS FROM BAWAG, THE AUSTRIAN BANK AT WHICH HIS FATHER, WALTER FLOTTL, WAS CHAIRMAN

ROB DOYLE, BW

tives. Some of Flöttl's money had been managed by Max C. Chapman Jr., CEO of Nomura Securities International Inc. (BW, Dec. 20, 1993), but the Flöttl representative claims that Flöttl no longer trades with Moran Group, Chapman's investment company.

Stories of Flöttl's penchant for secrecy abound. The Bermuda offices of Ross Capital can only be cleaned when the computer screens are off, says a knowledgeable Bermuda source. Employees must sign lengthy contracts that contain strict rules against divulging information, say Street sources. Flöttl recently hired the former head of the Secret Service in New York to provide security for his companies. Despite the fact that many Wall Street firms trade extensively with him, financial officers of two such firms told BUSINESS WEEK that Flöttl never provided them with satisfactory financial information. In one case, a government bond dealer stopped trading with Flöttl when he refused to provide a peek at his balance sheet.

"BEYOND WEIRD." Not surprisingly, much of the speculation about Flöttl centers on where he gets his money. In early 1992, Salomon Brothers hired Kroll Associates, the investigations firm, to look into rumors that he was tapping shadowy Middle East figures and that drug money and money laundering were involved. Kroll determined the rumors were baseless. But Arthur Liman, Flöttl's attorney, asked Kroll in 1992 to investigate the source of the rumors. Kroll identified an Austrian and an Israeli who had attempted to blackmail Flöttl, claiming that they could help him stop the rumors. Kroll says the Israeli had played this scam before and that both are now under Federal investigation.

Kroll Chairman Jules Kroll says he reassured Flöttl's trading partners the rumors were part of an extortion plot. "It was beyond weird," Kroll says. "Our conclusion was that these dirtballs had tried to shake him [Flöttl] down. He refused. The source of funds was an arrangement with his father's bank: Nothing more or less mysterious than that."

A special task force of representatives of the Austrian Central bank and finance ministry is now probing BAWAG's offshore activities. "It is not forbidden by law to have business dealings with family members. This is an ethical question that concerns only the supervisory board and the owners," says Anton Stanzel, head of the Austrian Finance Ministry's banking supervisory agency. One issue is whether the bank exceeded legal risk limits on dealings with one client.

Another matter is whether the BAWAG's supervisory board or Austrian regulators knew about the bank's dealings with Flöttl. Wolfgang Flöttl's representatives insist that the bank was fully informed. They point to a letter Wolfgang sent BAWAG in April that said: "The management and supervisory boards of the bank which reviewed and approved all of these investments can share our pride in these outstanding results." But Stanzel says he was unaware of the relationship. Banking sources in Vienna say the supervisory board wasn informed either. Walter Flöttl could n be reached for comment and a ban spokesman was unable to say whethe the board was fully informed.

As is the case with even routine fa ets of Wolfgang Flöttl's empire, th truth of this matter is likely to rema very elusive for some time.

By Leah Nathans Spiro in New Yor with Eric Frey in Vienna

CORPORATE FINANCE

BOISE HAS A LOT OF PAPER WORK TO DO

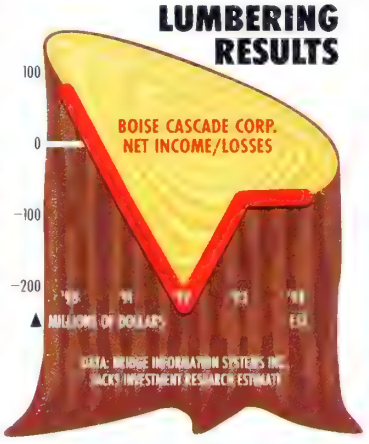
Fancy finance hasn't stemmed its losses. Maybe a new CEO can

In the paper industry, Boise Cascade Corp. doesn't have much of a reputation for cleverness or innovation. Its primary business is making plain white paper for office copiers and magazines. Because prices of these commodities have plunged, Boise has spilled red ink for three years. Even as competitors have begun to recover, Boise's losses deepened in the first quarter.

But when it comes to financing, Boise is known as one of the most creative companies around. Indeed, desperation has proved to be the mother of financial invention. Eager to preserve its credit rating and cut its huge $2 billion debt load but reluctant to issue common shares at depressed prices, Boise has eagerly embraced the latest in Wall Street financial technology. Guided by Goldman, Sachs & Co., the company has done three novel issues of preferred stock over the past couple of years, two of them convertibles designed to take advantage of a hoped-for rise in its distressed stock price. And in a bid to further slash its debt by several hundred million dollars, Boise is expected shortly to spin off its Canadian newsprint unit. If prices don't rise soon, though, Boise might have to get even more creative.

On Apr. 22, Chairman and Chief Executive John B. Fery, 64, pleased critics when he announced he will retire in July—ending a 22-year stint as CEO 18 months early. In January, Boise ha earned the dubious distinction of bei named for the third time to the Ca fornia Public Employees' Retireme System (CalPERS) list of America's wor investments. To deflect speculation th he was pushed out, Fery said one reas he decided to leave was that "the wor of the paper down cycle is behind us.

Whether Fery's departure will chan Boise's strategy is far from clear. Fery handpicked successo President George Harad, 50, rose throu the ranks on the finan side and was heavily i volved in the preferr issues. Fery wants hi to stick with Boise long-term business str egy, which is to focus white paper, expa office products distrib tion, and invest new "engineered" wo products.



"DAZZLING." Known a savvy financial strat gist, Harad has worked for Boise Ca cade since receiving his MBA from Ha vard University in 1971. After six yea as chief financial officer, the New Jers native was elevated to president a chief operating officer in 1991. "George dazzling in his intellectual ability and nancial acuity," says Walter C. Minni CEO of TJ International Inc., a Boi based competitor.

Boise Cascade could use a little dazz Formed in 1957, it moved aggressive into the paper business in the 1950s a 1960s. In the late 1960s, it overdiver fied into real estate and other unrelat

inesses. When Fery became chief executive officer in 1972, he rescued Boise m heavy losses and debt. A paper-intry man, he refocused the company wood and paper production. Profits red in the late 1980s. As a result, se, like its competitors, expanded duction capacity dramatically, plowing re than $2.2 billion into capital intments over five years.

TENANCE. But when demand began slow in 1990, prices plunged to Dession-era levels. While other compas moved aggressively into higherrgin products, Fery invested heavily ow-margin commodity papers, which fered most. Boise's debt rose again, le its results sank to the bottom of industry.

To pay down the debt, Boise grasped straws. Issuing more common stock s not an option, since the share price s wallowing near 10-year lows. Inad, Boise since 1992 has raised nearly 0 million with a series of preferredre offerings adorned with bells and stles, including provisions that would uce the number of common shares company has to issue if the price eeds certain levels.

The two convertibles were structured allow Boise to effectively sell stock ay at a premium. The first in the se, a $197 million issue of Yield Enced Stock, was completed in Janu. 1992. Then, Boise shares were ling in the low 20s; the deal essentialnabled the company to issue shares 0. But it had to offer a hefty coupon o so. One more benefit of the transn: It helped Boise continue the quesable practice of ng its annu- 60¢-a-share k dividend n as the pany was orrhaging .

Ultimately, what will help Boise most is inflation—at least in paper prices

In February, 1993, Boise issued $115 million in preferred shares, becoming one of the first companies to tap that market after a lull of several years. The second convertible transaction, dubbed ACES (Automatically Convertible Equity Securities) by Goldman, was completed in September for $182 million.

The financings have already cut Boise's debt-to-equity ratio from 1.5 to 1.2, and its goal is to bring it down to 0.7. "It helped preserve our credit ratings and gave us more flexibility to reinvest and sustain ourselves," says Theodore Crumley, who became Boise's chief financial officer in February. While analysts say the financings have helped keep the company alive, they point out that the moves have diluted outstanding shares by a whopping 34%.

Strengthening the balance sheet hasn't silenced Fery's many critics. "He doesn't know a good business from a bad business," says Louis Lowenstein, a law professor and corporate governance expert at Columbia University. Fery's harshest critic, though, has been CalPERS, the nation's largest public pension fund. Boise has languished on its poor-performers list for three of the past four years, longer than any other company. CalPERS notes that Boise has spent more than $200 per share over the past 11 years on capital investments, yet the stock trades at only 21¾, down from a 52-week high of 27¾. General Counsel Richard Koppes says CalPERS told Boise informally that it would like Fery to step down. And after Fery announced his retirement plans, Koppes told BUSINESS WEEK: "We're looking forward to new management."

Fery bristles at the criticism and insists that his strategy has been correct. "Going back to the 1980s, I would have stuck to the same plan." Waving a copy of the company's 1990 plan, he says Boise's strategy has not changed. Despite the recession, he thinks markets will eventually prove he picked the right kinds of paper.

ROOM TO MANEUVER. Still, Fery has made some minor course corrections. To lower Boise's dependence on commodity papers, he plans to convert all its smaller machines to higher-margin specialty papers. He cut paper production costs last year by some $200 million by modernizing mills and improving processes. Because of cutbacks in Northwest public timber harvests, Boise will have to curtail lumber and plywood production. But it is following the lead of other companies in producing engineered lumber, a hot new product starting to replace solid sawn lumber in building houses. On Apr. 25, Boise announced plans to invest $54 million in that business.

Ultimately, though, what will help Boise most is inflation—at least in paper prices. Since fixed costs are high, even a modest 10%, or $50-a-ton, improvement would add as much as $180 million to Boise's bottom line. That would also give Harad some breathing room, after Fery leaves as chairman in April, 1995, to chart a new direction.

Meanwhile, Boise's beleaguered shareholders are hoping that Harad will bring the kind of smarts to the business that he has helped bring to the balance sheet. That may be what it will take to lead Boise out of the woods.

By Dori Jones Yang in Boise, Idaho, with Phillip L. Zweig in New York

PAPER TRAIL: FERY (LEFT) AND HEIR APPARENT HARAD

LARRY FORD

BY GENE G. MARCIAL

DISNEY MAY HELP BLOCKBUSTER FEEL MORE ANIMATED

The impending Viacom-Blockbuster Entertainment merger may be headed for a bust, but don't cry for Wayne Huizenga, the flamboyant chairman of Blockbuster. The betting is that Disney may make a bid for the fast-growing giant video retailer.

That, in fact, is what several analysts have concluded. "Blockbuster is now very much in play," says one big investor, who has been accumulating Blockbuster shares. "The talk is that Disney will make a friendly bid for Blockbuster at better terms than Viacom's plan," says the investor, who has snapped up Blockbuster shares in recent weeks.

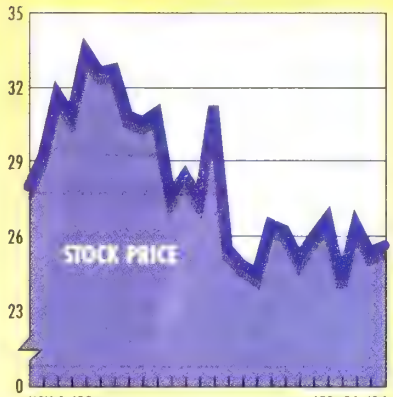
Huizenga denied there's any discussion, or any deal, with Disney. But some pros believe he would embrace a Disney offer even if it only equaled the merger pact Blockbuster has with Viacom. A Disney-Blockbuster merger, adds one analyst, would bring rich opportunities for both, including a Disney stake in Viacom through Blockbuster's ownership of Viacom stock.

The big stumbling block to Viacom's deal is the sagging price of its stock, which has tumbled to 23, down from 41 when the merger was announced in January. Viacom had offered Blockbuster its A and B shares, plus a VCR (variable common right, in this case)—for a total $30.97 equivalent value for each Blockbuster share. Viacom was counting on Blockbuster's hefty cash flow (expected to rise to $600 million this year, up from last year's $450 million) to help ease the debt burden it has assumed for its $9.6 billion acquisition of Paramount Communications.

PHONE CALL? Analyst Paul Marsh at NatWest Securities also thinks Disney—or a Baby Bell company, notably Ameritech—may make an offer for Blockbuster. Disney, he notes, has the financial resources as well as a real need for Blockbuster's videocassette retail system. Disney would also find Blockbuster's two other major assets useful: 71% of motion-picture and television distributor Spelling Entertainment, which now owns the movie company Republic Pictures, and 20% of Discovery Zone, the nation's largest operator of children's indoor-entertainment and fitness facilities. And Blockbuster now owns $1.8 billion of Viacom's preferred and common stock.

Already, Blockbuster is a major distributor of Disney's videos and other products, says Marsh. Ameritech would also find Blockbuster's many outlets beneficial in promoting its telephone services, he says. The analyst puts the takeover value of Blockbuster at $40 to $45 a share. But even without a takeover, Marsh thinks Blockbuster is worth $35 a share. He figures Blockbuster earnings will be $1.28 to $1.40 a share this year and will jump 30% next year. Disney and Ameritech declined comment.

CAN BLOCKBUSTER STAY GLUM FOR LONG?



DATA: BRIDGE INFORMATION SYSTEMS INC.

GET READY FOR A TUPPERWARE PARTY

Remember Tupperware—and those good old gatherings? They're back. Their quiet return last year let shares of Tupperware maker Premark International nearly double—from 48 in January, 1993, to 88 in December. The stock has since eased to 72.

No matter. Tupperware bulls, including Fidelity Management, which owns 10% of Premark, are convinced the stock is poised for a further runup. "Premark not only turned around Tupperware sales in the U.S. but also pulled the operations out of the red," says Jane Gilday, an analyst at Tucker Anthony in Boston. She notes that Tupperware operations in the U.S. suffered a loss of $22 million in 1992 but recovered strongly in 1993, posting a $12.5 million profit.

Gilday says prospects for Tupperware sales worldwide have brightened as the company has continued to slash costs, revitalize recruiting, and bolster marketing strategy.

That's not all. Gilday thinks that with Tupperware back on its feet, Premark will seriously consider spinning off two other units: its food-equipment group (maker of the Hobart line of machines), which accounts for 33% of sales but just 18% of earnings, and its group that makes plastic laminate flooring, tiles, and other products for kitchens and bathrooms.

Tupperware alone is worth $75 a share, Gilday believes. The combined value of the two other divisions is $25 for a total worth of $100. She expects the proceeds from any sale will be used to pay off debt and repurchase shares.

TAKING A GULP OF WATER POINT

In spite of stiff competition from bottled waters, tiny newcomer Water Point Systems thinks it can join the fray—and turn in some neat profits. You may have seen its vending machines outside Kmart or Wal-Mart. These coin-operated vendors, bearing the Canada Dry trademark, aren't yet a threat to the prepackaged, off-the-shelf water on sale almost everywhere. But money manager James Melcher, president of Balestra Capital, has large bets on this company. Water Point went public in December at 5 a share and is now trading at 4⅞. Melcher sees the stock doubling in 12 months.

Water Point markets in two ways. In offices, its water-treatment and dispensing units, hooked up to the customer's water supply, are designed to replace traditional bottled-water coolers. And at supermarkets and discount stories, its vending machines are connected to the municipal water main. Water Point's dispensers come with either a basic carbon-filtration system or an advanced reverse-osmosis process that removes lead, sodium, and other impurities.

The company is still in the red, but Melcher sees it earning 50¢ a share next year on revenues of $15 million, a strong spurt from last year's estimated $5 million. Water Point President and CEO Mark Hope says Melcher's estimates can be achieved. Furthermore, he sees 1996 revenues of $30 million and earnings of $1 a share.

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IS MESA AIRLINES FLYING TOO HIGH?

The more Larry Risley expands, the more Wall Street frets

FORMER MECHANIC RISLEY: "NO MBAs"

Farmington, N. M., like much of the Southwest, doesn't reveal itself easily. In the hot, bright sunlight, its mesas and gnarled landscape look brown and infertile. The town itself is a dusty collection of bleached concrete buildings and ramshackle trailer parks. Tucked away in New Mexico's barren Four Corners region, Farmington is an oil boomtown that isn't booming anymore. It's the kind of place where the car lots outnumber the trees.

But if you look closely when the light begins to angle, the mesa country's richness and color start to emerge. Larry Risley loves it there. While many Farmington workers choose to commute from Durango, Colo.—a scenic, artsy enclave 55 miles northeast—the founder of Mesa Airlines Inc. is building his dream house on 35 acres at the edge of town. Larry L. Risley and Farmington were made for each other—simple and unpretentious. "Where I come from, there was no such thing as an MBA," Risley says.

A little more than a decade ago, Risley could barely hold down a job. Now, at 49, he's chairman of one of the nation's most successful airline companies. Starting in 1980 with a five-seat Piper Chieftain prop plane, Risley built a low-cost commuter-airline empire that consists of eight separate carriers spread across the nation—several of them tied through marketing agreements to USAir Inc. and United Airlines Inc. During a period when many airlines have struggled just to stay aloft, little Mesa has lost money only once in its 12-year history. Adjusted for splits, its share price has increased tenfold sin it went public in 1987. Is ley's 2.6% stake is wort hefty $17 million.

> A pickup truck was part of the collateral when Mesa started up with one five-seat prop plane

Lately, though, invest have begun to worry ab Mesa: The stock has trad down 26% since mid-Ma to about 16½ (charts). H of the decline is due to general drop in stock pr es. But investors have reacted to Mesa's hints its fiscal second-quar earnings will be flat du creeping costs in one of units. While analysts expect full-year profits post a sharp gain o 1993, the bad news co at a time when Mesa, w expected 1994 revenue only $354 million, is barked on a series of b outs and equity inv ments that could cost m than $120 million. Ris has been soaring. But hi ry is littered with air entrepreneurs who flew close to the sun.

SAME FEATHERS. Me biggest target appears be Continental Express, sprawling commuter s sidiary of Continental lines Inc. Sources close the talks say Mesa weighing a deal to pay to $60 million for a ma ity of the unit. Trouble Continental Express, with about $ million in sales, competes directly w Mesa units that fly the colors of Un Express and USAir Express. Consequ ly, sources say, the unit would event ly have to be spun off to shareholder a separate company.

A deal would be the second Mesa struck recently with Fort Worth (T financier David Bonderman, whose vestment group controls Continen Bonderman has bid to finance the em gence of America West Airlines from bankruptcy, and Risley has agr to make a $25 million investment fo 10% stake.

Meantime, Risley is busy putting finishing touches on a $32 million dea acquire financially strapped CCAir Inc commuter airline based in Charlo N. C., that flies as USAir Express. H also risking $3 million to purchase S Air, which flies routes around the Vi Islands and in Puerto Rico. Mesa is e going international, taking a 24% st

small commuter carrier in Britain. The question is, can little Mesa handle all this action at once? Some think "Every acquisition they've ever done improved earnings," enthuses one institutional holder. Others aren't sure. "They have an impeccable record," says Kidder, Peabody & Co. analyst Samuel Buttrick, "but as Mesa expands, it becomes an increasingly complex juggling act." Even Risley has concerns about a possible Continental deal. "It'll take a lot for my people to convince me it would be in our best interest," he says.

HAPPY SUNDAYS. The problem isn't financing. Mesa's balance sheet is strong, with it has $135 million in cash from operations and secondary stock offerings. Continental Express alone provides enough management challenge. The unit lost $70 million last year, and Mesa would have to replace its fleet, institute cost controls, and cull staff to turn it around. Then, Mesa would have to structure a complex transaction to spin it off. CCAir would require heavy attention as well. And given America West's ups and downs, Mesa's investment in the carrier—though passive for now—will demand Risley's vigilance.

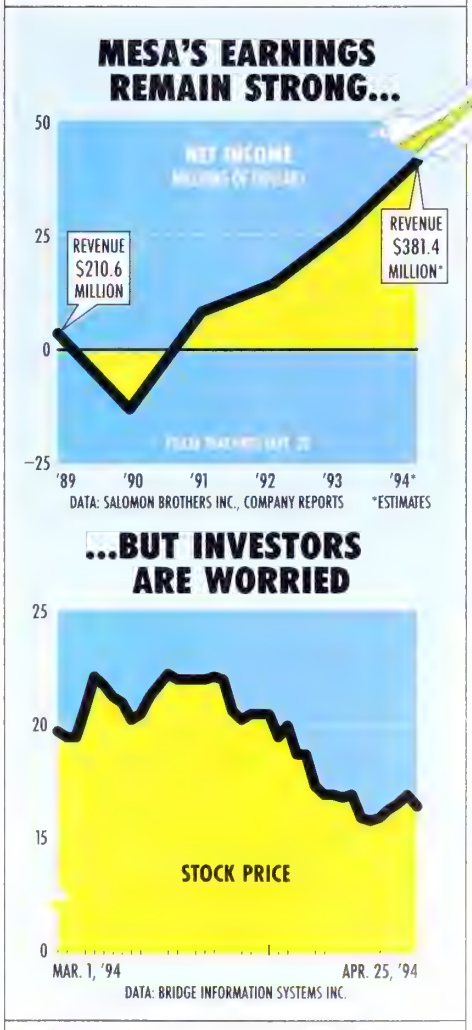
Taking risks, though, is nothing new for Risley. In 1982, he and his wife, Janie (who now sits on the board) pledged their small house and pickup truck to finance a $125,000 loan to buy the plane they were using to shuttle passengers between Farmington and Albuquerque. There he sold tickets. Larry did the maintenance. On Sundays, the couple relaxed with their young son by washing down the plane and sprucing up its cabin.

Looking back, Risley seems as surprised as anyone by his unlikely success. "There was never any grand plan," he says with a shrug. The son of a firefighter and school teacher, Risley grew up in Abilene, Tex., and hoped to emulate his two older brothers who landed steady work as union mechanics for Delta and American. Larry, who "figured anything over a 70 was wasted effort," barely graduated from high school. Indeed of college, he joined the Army and found himself stationed in Germany. He eventually went to trade school to get his aviation mechanic's license.

Risley never cottoned to working for someone else. When he did find jobs at general aviation airfields, he would soon quit or get himself fired after flare-ups with his bosses. While Janie worked as an X-ray technician, Risley held a jumble of odd jobs to make ends meet. He installed burglar alarms and worked as a janitor in a baby clothes factory. "I was always out of my element," he says.

Risley's first attempt at going it alone came in 1970, when he set up an aircraft engine shop in Waxahachie, Tex. That didn't work out either. Risley quickly found himself deep in debt after several customers welshed on payments. Risley says he eventually made good on his debts; the shop ended up folding.

Risley finally found his feet in 1979 when his brother-in-law helped him get a job managing a charter service for Four Corners Drilling Co., an oil company in Farmington. Risley kept a fleet of 14 small planes going, ferrying drillers to and from remote sites in the high desert. The business made extra money with government contracts to fly residents of the nearby Navajo reservation to hospitals. Everything went fine until oil prices plummeted in 1980. Then, says Risley, "drilling stopped overnight."



Most of the planes were sold off, but Risley persuaded Four Corners to keep one so he could start a shuttle service between Farmington and Albuquerque. Risley advertised his little airline on local radio and put up signs along roads near the Four Corners Regional Airport. He found he could charge half what rival Frontier Airlines Inc. was getting and still make money. In 1982, the Risleys decided to buy the Piper and go into business for themselves.

Mesa's acquisition drive began in 1990 when Jonathan Ornstein, a 31-year-old airline financier, entered the picture. An executive with a tiny carrier called, Air L.A., Ornstein first approached Risley about buying out Mesa. Risley wasn't selling, but he liked Ornstein's brashness. He hired the New Yorker and sent him out to scout deals for Mesa.

Ornstein, like his boss, lacks a college degree. But that's about all the two have in common. They battle constantly over the pace of expansion—Risley taking the more conservative position. So far, however, their formula has been effective: find an ailing carrier in a good market, slash staff and institute cost controls, upgrade the fleet, and then let the managers run their own show.

Cost savings come in a number of ways besides lean management. First, most of Mesa's units have code-sharing agreements with major airlines that funnel traffic their way without big marketing expense. Second, Mesa's 155-plane fleet is largely standardized around the twin-engine Beech 1900 turboprop. Standardization allows Mesa units to share a single maintenance facility in Farmington. And it lets the parent—Beech Aircraft Corp.'s largest commercial customer—buy in bulk, assuring better prices and terms.

ODD COUPLE. Since Ornstein came aboard, Mesa Airlines has struck a profitable balance between making acquisitions and minding operations. Given the recent flurry of dealmaking, however, some industry watchers wonder whether Ornstein's go-go style is at last getting the better of Risley's pragmatism. Risley looks at it this way: "We are at two ends of the spectrum. I'm an operations guy. Jonathan wants to grow and make acquisitions. There's definitely a controversial environment in the office, but that's what makes us have a good team." The tug-of-war is currently playing out over the proposed Continental Express deal.

Sometimes, when it gets to be too much, Risley scoots out to his 35 acres and chats with the workers building a new house for him and Janie. He likes to point out the spot in the yard where a large picnic area and gazebo will be—a place for his extended family to gather on weekends and watch the light change. "People keep trying to frame me as a large-business executive," Risley gripes. "But when things start to get too big, I kick and scream a bit." As Mesa considers its biggest deal ever, a little kicking and screaming may be a good thing.

By Eric Schine in Farmington, N. M.

ALAN BAKER/N.

BIOTECHNOLOGY

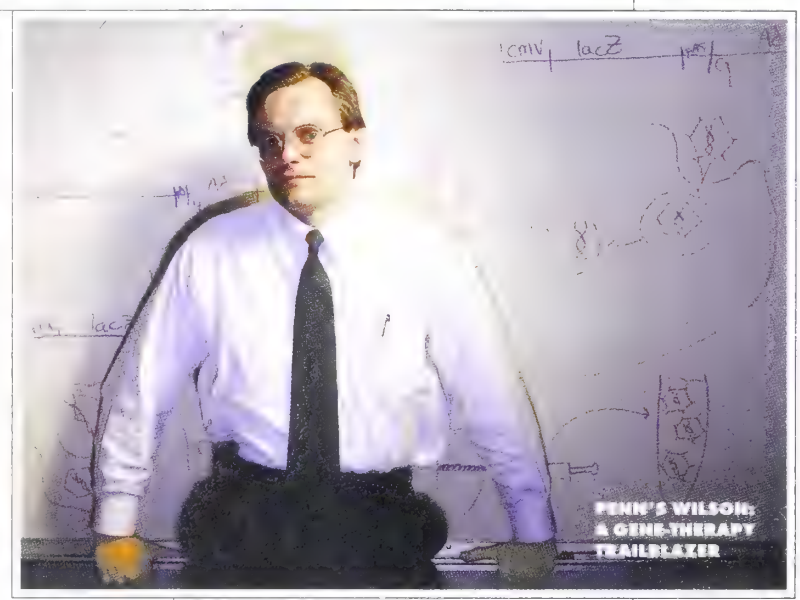
THE NEXT WONDER DRUG MAY NOT BE A DRUG

It may be a therapeutic gene—and results are improving

James M. Wilson found his calling 14 years ago, as a brash medical student and PhD candidate at the University of Michigan. After uncovering the genetic mutation responsible for a rare inherited disease, he could not wait to tell the mother of one of the young victims. But the mother's reaction was stony silence. "She didn't have to say it—it was obvious she was asking: "How is that going to help my son?"" Wilson says.

The sad answer, a humbled Wilson realized, was that the discovery offered no immediate hope. But he also knew that a few visionary scientists, such as Dr. W. French Anderson at the National Institutes of Health, were talking about a radical idea known as gene therapy—treating disease by slipping in new genes to fix defective ones. The notion was so far into the realm of science fiction that it was scorned by most mainstream researchers. But, facing a mother's anguish, Wilson "decided what I was going to do."

With characteristic determination, he has proceeded to forge a unique career. Unlike most medical researchers, who specialize in a disease, he has concentrated on a method. "Jim really is the first person who trained through his entire career to be a gene therapist," says Dr. William N. Kelley, CEO of the University of Pennsylvania Medical Center & Health System. Now that strategy is starting to pay off. A year ago, Kelley hired Wilson, 38, to head an ambitious institute for gene therapy at Penn. And in March, Wilson published the first paper showing that an added gene can make a crucial biological—and perhaps therapeutic—difference.



The pioneering experiment was performed on a 29-year-old Canadian victim of familial hypercholesterolemia (FH), an inherited defect that reduces the liver's ability to process cholesterol. The woman had already suffered a heart attack at age 16 and undergone bypass surgery at 26. To tackle the disease, Wilson and his team sliced out a hunk of her liver, slipped correct copies of a flawed cholesterol receptor gene into the excised cells, then returned them to the liver. Two years later, the gene-spliced cells appear to be thriving, reducing the woman's cholesterol levels by some 20%. "What they did was a technical tour de force," says Dr. Gary J. Nabel, professor of internal medicine and biological chemistry at the University of Michigan.

THE NEXT BEST? This experiment is only a small part of Wilson's portfolio. He's conducting one of the trailblazing gene therapy trials for cystic fibrosis and is aiming at other diseases, from a rare metabolic ailment to cancer. At the same time, he is busy recruiting two dozen new faculty members and raising money. He's also exploring the idea of forming a company and forging links with pharmaceutical companies to commercialize his gene-delivery technology. "There are very few people who could pull it all off the way Wilson has," says Dr. Terence R. Flotte, a Johns Hopkins medical school pediatrician. Add the irrepressible Anderson: "Present company excepted, he's the best person in the field."

Such praise isn't universal, of course. Wilson has come under fire from molecular biologists for trying treatments on humans before the basic science is fully understood. Some competitors also downplay the FH result, saying the effect on serum cholesterol is relatively small and that the invasive nature of the

IN PURSUIT OF GENE THERAPY

More than 200 people have already been treated with therapeutic genes in more than a dozen clinical trials. Here are some highlights:

DATA: BUSINESS WEEK

FAMILIAL HYPERCHOLESTEROLEMIA

■ By inserting the gene for a cholesterol receptor into the liver, scientists have been able to lower cholesterol levels in a patient with this deadly inherited disease.

ADA DEFICIENCY

■ Scientists have put the gene for a key natural enzyme, adenosine deaminase, into the blood cells of children who lack the enzyme. So far, the therapy is preventing the deadly effect of the disease: a destroyed immune system.

CYSTIC FIBROSIS

■ Researchers are delivering a corre cystic fibrosis gene to the lungs or n passages of victims. Preliminary resu show that the altered cells make the corrective protein.

MELANOMA

■ By inserting genes that make canc more "visible" to the immune system scientists hope to get the body to attc tumors. In initial trials designed only safety, one patient experienced remi

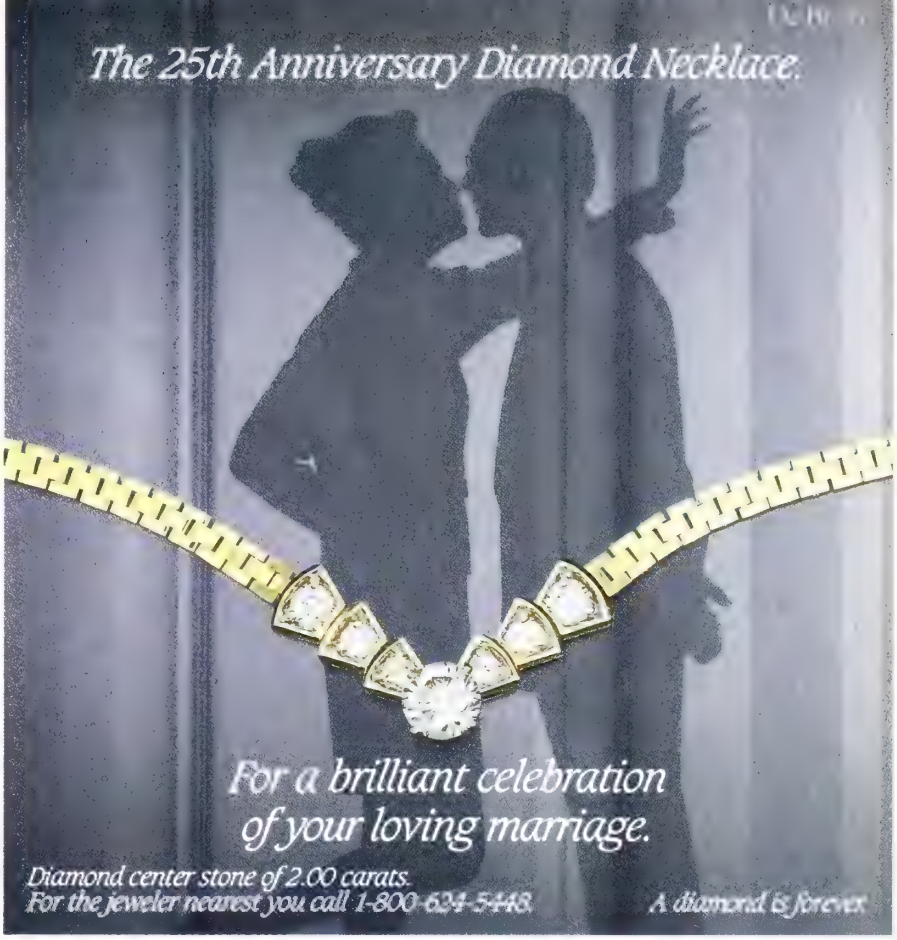
atment limits its potential as a prod-
"You're not going to lop off one-
rter of people's livers and make a
of it," sniffs one rival.
Other researchers wonder if Wilson
naking Penn too much a clone of in-
try. "He has basically set up a small
ech company within academia," says
kins' Flotte. Wilson has built a Food
Drug Administration-approved manu-
uring facility to make gene-delivery
tems—or "vectors"—an approach oth-
schools are starting to emulate. He's
one of only a few academics doing
ly safety tests in primates. That's
ish, says cystic fibrosis gene-therapy
neer Dr. Ronald G. Crystal, chief of
monary medicine at New York Hospi-
Cornell Medical Center and co-
nder of startup GenVec in Rockville,
"Gene therapy is too expensive to
academically," he says.

OFOUND IMPACT. Whether or not
son's path is the best one, the ear-
t, meticulous researcher is currently
the center of a quiet reassessment
gene therapy. No one in the field
bts that its eventual impact will be
found. And optimists such as Thierry
rsac, general manager of the cell and
e-therapy division at Rhône-Poulenc
er Inc., predict that the first gene-
rapy products could reach market as
y as 1997. But as Wilson delves deep-
nto the basic science, he's becoming
re cautious. "Gene therapy is going to
huge," he says. "But the technology
biology aren't there yet. It's going
ake a long time. How long? My life-
e." This raises the hackles of biotech
panies that promise a faster payoff.
e thing we do that makes people
ous is talk about problems," says
son.
or many applications, for instance,
thorniest issue is the body's reaction
eceiving a hunk of DNA a million
s as large as a typical drug mole-
. Take cystic fibrosis. Back in 1989,
stal, then a researcher at the NIH,
the bright idea of slipping in the
ective gene by linking it to crippled
ions of adenoviruses, the cause of
and pneumonia. When Wilson tried

CANCER

sts have inserted a gene that makes
lls susceptible to a common drug,
inistered the drug. In rats, this
t many brain tumors; in people,
nent hasn't been as effective.

chers are adding genes for part of
irus to skin cells of AIDS patients.
is that those cells will boost the im-
tem to better fight the virus. In fact,
appened in two patients.



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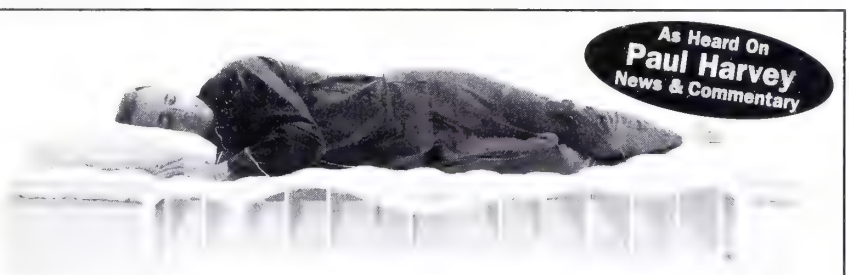

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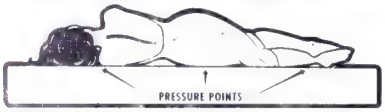

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the strategy in baboons in late 199 however, the animals came down with "boatload of wicked pneumonia," he r calls. The dismayed reaction to his fin ing from biotech industry scientists rei forced his decision not to get into b with industry too quickly. "I know that I were in a company, I would have be subjected to pressure to downplay t results," he explains.

The CF problem may not be insu mountable. Wilson's lab and others ha concocted safer, more effective aden virus vectors and are experimenti with a variety of other promising ger delivery systems. But all still prese formidable hurdles—which have two co sequences for Wilson and other researc ers. One is that gene-therapy clinic trials such as Wilson's FH study a more basic research than drug develo ment. "Gene therapy is turning the cli ic into a lab," says oncologist Albert Deisseroth of M.D. Anderson Canc Center in Houston. That's why researc ers warn against believing hype fr companies that sponsor many tria "Companies are very skillful about te ing something in a way that helps the cause and stock," says one scientist.

VARIOUS VECTORS. Beyond that, t growing number of possible gene-deli ery systems—ranging from viruses globs of fat called liposomes—is changi the shape of the industry. The fir startups, including Somatix Therapy, G netic Therapy, Vical, and Viagene, ter ed to form around one vector. But no companies have all picked a second w ger, such as liposomes or adeno-asso ated viruses," says Dr. Richard Boucher a pulmonary disease special at the University of North Carolina. Apr. 20, for instance, GenVec linked with Theragen Inc. in Ann Arbor, Mic adding herpes-based vectors to its or inal adenovirus systems. And in a fe weeks, Rhône Poulenc plans to announ an entire network of alliances. "We wa access to all the core technologies," e plains Soursac.

Wilson's new Institute for Hum Gene Therapy is well-positioned to ta advantage of these trends. Penn h chipped in an estimated $12 million get it off to a fast start, and Wilson h already snared $8.5 million from t Cystic Fibrosis Foundation—the large grant it has awarded—plus major fu ing from the NIH. Those resources gi him the freedom to explore the m promising treatments and vectors "wi out the requirement that we come with something in someone's busine plan," he says. And he hopes to ke things that way at Penn until the d gene therapy offers real hope.

By John Carey in Washington, w Geoffrey Smith in Boston

evelopments to Watch

D BY JUDY SILVERMAN

HOST OF USES R RADAR ON A CHIP

Radar may soon be in everything from cars to home toolboxes. Thomas McEwan, an engineer at Lawrence Livermore National Laboratory, has adapted radar-based sensors originally developed for Livermore's laser-fusion project. Chips send out electrical pulses as short as a 50-trillionth of a second. The sensor detects echoes from objects up 00 feet away, noting any changes in position. The big kthrough: The sensor and transmitter package costs $10 to e, compared with perhaps $40,000 for systems that perform same functions, and it will eventually sit on one chip.

merigon Inc. in Burbank, Calif., has licensed the techgy to create warning systems for drivers who are backing nd cruise-control systems that maintain constant distanc- rom other cars. Next year, Zircon Corp. in Campbell, Calhopes to begin selling radar detectors that can locate l within concrete. Other possibilities: home security sys-s, medical devices, and search-and-rescue gear.

IS *FAUX* DNA LPS KEEP DISEASE AT BAY

ince the late '80s, researchers have been excited about the idea of using so-called antisense technology to foil diseases have a genetic component—such as replicating viruses. -like antisense drugs attach to stretches of harmful genetiaterial the same way a zipper zips, preventing it from icating or doing its job. That's great in the lab, but until there have been no trials on patients to prove they work. n Apr. 28, scientists from Isis Pharmaceuticals in Carlsbad, ., announced a breakthrough: They found that an anti- e drug halted the progression of cytomegalovirus-induced iitis, a disease that can lead to blindness, in a small study DS patients. All of the patients had previously failed to be ed by other available treatments, but those getting the est doses of the new drug, dubbed 2922, responded favor-

More extensive studies will be conducted this summer, says Isis CEO Stanley T. Crooke: "Antisense is a technolthat's working, and working now."

LICK WAY SALVAGE USED OIL

nly 8% of the 1.4 billion gallons of used lubricating oil generated in the U. S. each year is re-refined into highty base stock. Hoping to raise that proportion, Interline urces Corp. in Alpine, Utah, has developed a process it will allow companies to turn a profit on re-refining even iall quantities.

ie standard re-refining treatment calls for a heating proin which additives and contaminants can gunk up expensive equipment. The new process frees the oil from such materials before any heating takes place. That's because Interline has figured out a way to mix a propane solvent with the used oil at room temperature. The propane latches onto the hydrocarbons in the oil, casting the rest aside in the form of a nontoxic asphalt base. The oil is then distilled. The process doesn't involve the costly finishing step used in the standard treatment, but delivers a product that's nearly as good.

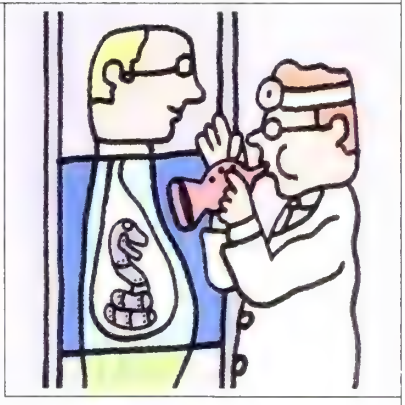
Interline is negotiating with some major U. S. oil companies on licenses for the process. Western India Group in New Delhi has licensed Interline's technology to build plants in 10 countries in the Middle East and Far East.

SHORT-CIRCUITING CANCER'S BATTERY

To multiply rapidly, viruses and cancer cells rely on a backup battery: an enzyme called creatine kinase (CK). The enzyme catalyzes the production of ATP, which fuels metabolism in cells. Rima Kaddurah-Daouk and her colleagues at Massachusetts Institute of Technology discovered the hidden source of energy when they found that tumor cells had unusually high levels of CK.

Now, Amira Inc. in Cambridge, Mass., a division of Repligen Corp., has created a drug that blocks CK and short-circuits that backup battery. The drug is a small molecule called AM285. Since healthy cells don't rely on CK, blocking the enzyme could offer a highly specific treatment with few side effects. Animal tests show that anticancer drugs are dramatically more effective when used with AM285. "Cancer needs to be handled as a chronic disease like herpes, with the focus on arresting its growth instead of killing it," says Kaddurah-Daouk, Amira's president. Trials of the drug in cancer patients began last December. The company hopes to begin trials in AIDS patients infected with the cytomegalovirus that can lead to blindness.

ROBOT SNAKES THAT HELP DOCTORS THROUGH TIGHT SPOTS



STUART GOLDENBERG

In Joel Burdick's vision of the future, serpents are saviors. Not the kind with fangs, but robotic snakes designed to wiggle through the rubble of a collapsed building or a patient's intestines. The mechanical engineer at California Institute of Technology has built a computerized, multijointed snake that twists and inches forward when air is moved between bladders in its body.

Doctors at Cedars-Sinai Medical Center in Los Angeles are testing a 10-inch plastic-and-rubber prototype in pigs. Entering painlessly through the mouth or rectum, the snake is computer-guided to slither to places that current fiber-optic endoscopes have difficulty reaching. With a camera attached, the snake could radio pictures to a computer screen outside. Armed with a small laser, it could perform internal surgery. Burdick thinks his snakes may be used one day to check gas lines, toxic waste dumps, and aircraft engines.

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GUNNING FOR MICROSOFT: THE FEDS' NEW WEAPON

The Justice Dept. is pushing an antitrust theory used on utilities

The feds may be zeroing in on Microsoft Corp.—again. The Justice Dept.'s Antitrust Div. hired a new lead litigator, Samuel R. Miller, for the Microsoft case in December, and since then it has been amassing reams of documents to support a broad-based antitrust case. Justice, which inherited the investigation from the Federal Trade Commission last August, has been haggling with Microsoft for more information and in March issued fresh civil investigative demands, or subpoenas, to several companies—including Texas Instruments Inc. and XSoft, a Xerox Corp. unit.

A final decision on what type of case, if any, Justice will bring is not expected until summer. But Anne K. Bingaman, the department's gung-ho antitrust chief, who recently hired 60 new professionals, is eager for a major case—and Microsoft could be it.

What's Justice focusing on? The department isn't commenting. But attorneys on both sides say the probe has been widened to include charges that Microsoft's near-monopoly on operating systems—the basic software that controls computers—gives it an unfair edge in applications that run on those systems. That's in addition to a narrower case involving licensing policies for Microsoft's MS-DOS and Windows operating systems. The policies, say critics, make it tougher for personal computer makers to buy from rivals.

VOW OF SILENCE. Some Microsoft rivals think there's plenty of evidence that Microsoft uses its huge clout to win in applications, too. A recent example that was relayed to Justice: In April, software maker WordPerfect Corp. was offered an early copy of Chicago, the next version of Windows. Such advance access is essential for getting new applications to market. This time, Microsoft added a clause to the routine nondisclosure contract: For three years, WordPerfect employees who see Chicago can't share information with those working on OpenDoc—a program being co-developed with IBM, Apple, and others. OpenDoc, a method for sharing data between programs, competes with a similar Microsoft program. WordPerfect balked, and Microsoft backed down.

Another development caught Justice's eye. Microsoft lost a patent-infringement suit against Stac Electronics, a tiny Carlsbad (Calif.) maker of data-compression software, but convinced a court that Stac illegally duplicated hidden features in MS-DOS, which Microsoft called "trade secrets." Those features give Microsoft's compression program an edge that Stac can't match. Justice could view that as evidence of how Microsoft uses operating-system knowledge to head off applications rivals.

Microsoft's small victory could backfire. It bolsters the concept of "essential facilities," a broad antitrust theory that's a current favorite at Justice. Since Microsoft's operating systems are so key to creating applications, the argument goes, Microsoft must behave like a utility, granting access to all. Argues the general counsel at a rival software maker: "It's fairly clear, you can't do business without" an operating system.

But the essential-facilities argume has had a poor track record lately. failed, for example, in a 1991 airline-re ervation system suit. Critics contend penalizes companies for developing successful product or technology. Sa Ronald Abramson of law firm Hugh Hubbard & Reed: "It's a long shot."

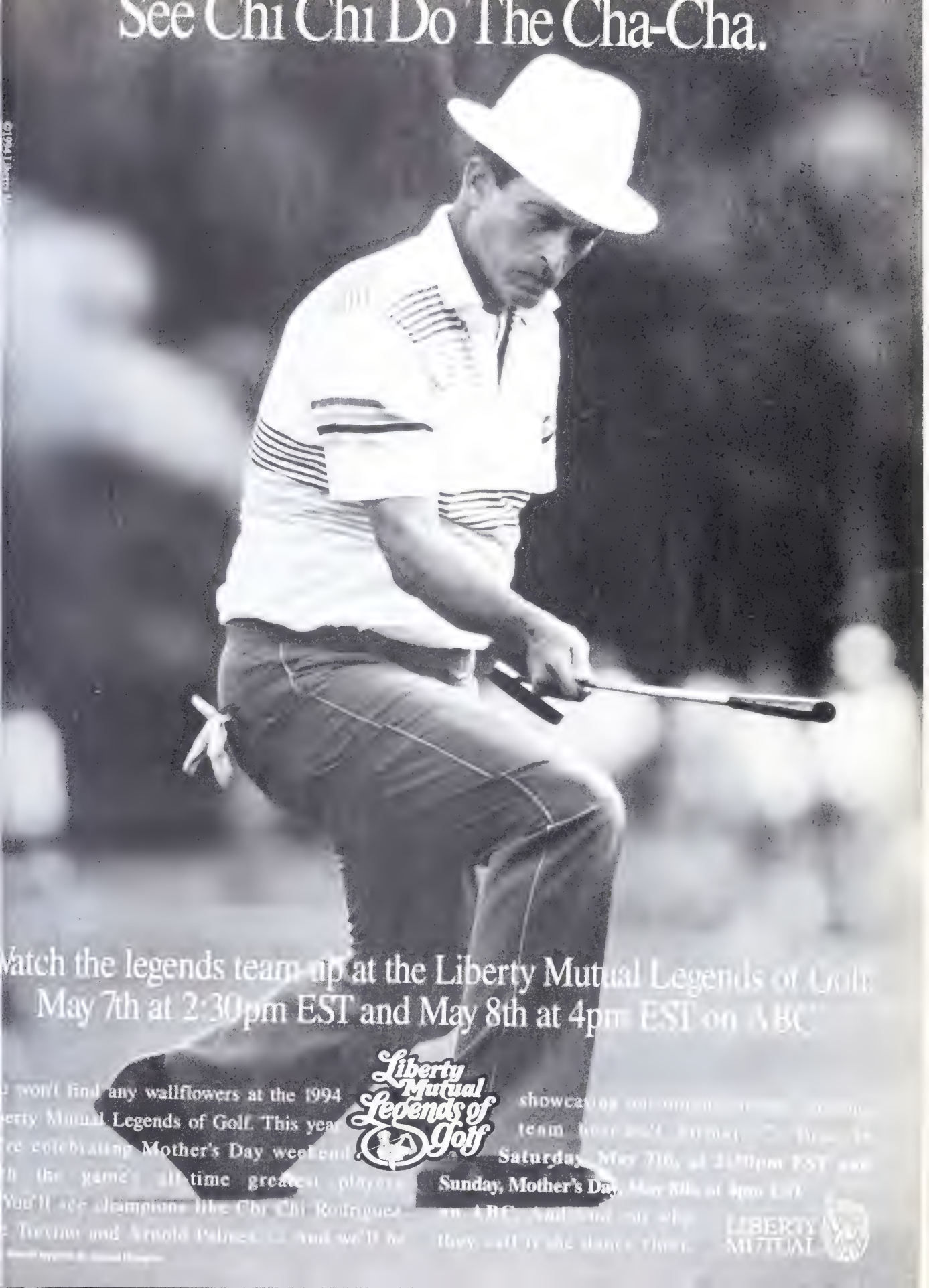
Other broad theories, such as mono oly leveraging, also may be hard prove, legal experts say. That's part why the FTC gave up that path befo deadlocking on the narrower issue Microsoft's licensing practices. The co servative FTC commissioners also wo ried that likely remedies—erecting "Chinese wall" between Microsoft's sy tems and applications groups or requ ing disclosure of product information would constitute excessive governme intervention.

"TOO COMPLEX." Justice appointees m be less hesitant. Says David R. Bra ford, Novell Inc.'s general counsel: "W sense a general interest [at] the Justi Dept. to explore issues that seemed t complex for the limited resources of FTC to handle."

One factor working in Microsoft's vor: Novell, one of its harshest crit plans to acquire WordPerfect, a ma of office applications. That puts Novel the Microsoft-like position of supply operating systems and applications. A a wave of mergers is producing ot big rivals, which could make it harde prove Microsoft's dominance. Perha But at the moment, Justice looks h bent on at least trying.

By Amy Cortese in New York, Cat ine Yang in Washington, and Rich Brandt in San Francisco

BINGAMAN VS. GATES: SHE MAY CHARGE THAT MICROSOFT TAKES UNFAIR ADVANTAGE OF ITS NEAR-MONOPOLY IN ESSENTIAL OPERATING-SYSTEMS SOFTWARE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EDITED BY AMY DUNKIN

Investing

EQUITY-INCOME FUNDS: HOW MUCH SAFETY?

For those desiring a sound investment in these turbulent times, equity-income funds seem to fit the bill. In theory, they provide investors with regular income along with the chance to participate in long-term stock growth. In addition, if the market falters, the income they provide acts as a cushion, shielding the fund from the most brutal losses. Unfortunately, the first-quarter results this year belied these attributes: Equity-income funds performed worse than the average of all other diversified equity funds—hardly reassuring for a supposedly defensive investment. But don't pass them by. If the current market decline continues, they may turn out to be a safer haven than other types of equity investment.

The trick to investing in this group is understanding that, despite their common classification, the funds have widely varying strategies. The traditional equity-income funds simply pick stocks that are paying out high dividends. Hence, they are meant for low-risk investors who need to earn current income but who also want to keep up with inflation. Other funds are set up more like balanced funds, dividing their portfolios among growth stocks and fixed-income holdings, such as high-yield bonds. Then there are the aggressive funds, which seek a high total return and pay little attention to steady income. "The only thing equity-income about some of the funds is the name," says Roger Newell, who is portfolio manager of the more traditional Vanguard Equity-Income Fund. "They use derivatives and everything else."

Whatever the strateg the individual funds, the l term success of the categ rests on the effects of dend compounding. This h account for a 10-year ave annual return of 12.6%, a bit lower than the 13.1% erage over 10 years for gressive growth funds, w are far more volatile. "Yie not going to protect yo the time, but yield is a cr component of total retu says Brian Posner, man of Fidelity Equity-Incom Overall, the category's score is 30% to 40% l than that of the average ty fund, says Amy Arnot analyst at *Morningstar M Funds*.

GRANNY'S APPROACH. To school managers, a true ty-income fund must hav overall yield of 1.5% t more than the average o Standard & Poor's 500-s index (currently 2.9%), Nola Falcone, manage Evergreen Total Re Fund, who calls herself grandmother of this proach." Since yield goe when the stock price

THE DIFFERING APPROACHES OF EQUITY-INCOME FUNDS

Fund	Strategy	Yield*	Total return Year-to-date**	Total return 3-year†
FIDELITY EQUITY-INCOME II	Picks value stocks that may be low-yielding (or non-yielding), seeking high total return and a gross yield that need only match the S&P 500	2.4%	.64%	19.8%
[illegible] INDUSTRIAL II	Has 65% in growth stocks (which must have some dividend) and 35% in cash, bonds, utilities, REITs, and convertibles to boost the yield	3.8	–2.96	13.0
STR[illegible] MONT[illegible] DIVIDE[illegible]	Carries 50% to 70% electric utilities and the rest in convertibles and REITs, aiming for as high a dividend as possible	7.3	–5.38	9.8
T. ROW[illegible] EQUITY-I[illegible]	Looks for undervalued stocks with high yields but has freedom to pick low-yielding stocks and diversify across sectors	3.3	–1.69	11.6
VANGUARD EQUITY-INCO[illegible] E	Holds nothing but common stocks, preferably companies whose yields are higher than their historical [illegible] relative to the S&P industrial average	4.6	–4.12	9.0

*12 months trailing [illegible] 4/22/94 †Average annual total return DATA: MORNINGSTAR INC., BUSINESS WEEK, FUND COMPANIES

ı, that discipline naturally isposes managers to buy ıtrodden "value" stocks tend to do well in bear ets yet perform a little ıd the pack in up ets.

aditional funds such as ne's Evergreen Total Re- and Vanguard Equity-In- hold stocks that provide y income—even when it s at the expense of the return. The long-revered ton Monthly Dividend seeks such a high yield t has ended up carrying een 50% and 70% of its portfolio in electric util- The remainder is in real investment trusts (RE- nd in convertible secur- It yielded 7.3% for the g 12-month period, and returned an average of 13% over the past 10

concentration in inter- te-sensitive utility and ial stocks, which have virtually the only game n for high dividends in ast few years, helped down the traditional in the first quarter. They all lost in the neighborhood of 4% to 7%. Managers of these battered funds make no apologies for staying the course. "We can't do what other funds would do," says James Stratton, who runs Stratton Monthly Dividend. "Our shareholders live off the income." But in early April, interest-rate-sensitive stocks started to improve, while cyclicals fared badly, which is typical in bear markets, says Vanguard's Newell. The farther the market falls, the better traditional equity-income funds will do relative to other funds. "We're just kind of touching that point now," he says.

RICH GLEANINGS. With many of their favorite stock groups currently knocked down in price, fund managers are finding increased opportunities to gain higher yields. Plus, more corporations in general have increased their dividends this year than in any other year since 1981. "I've never seen a market with such good buys in the yield sector," says Falcone.

Unlike traditional funds, other types of equity-income funds had the flexibility to avoid much of the damage wreaked in the first quarter. Over the years, more funds have veered from the equity-income mandate: They produce little steady income, and they don't even stick to equities. While they can be volatile, the more aggressive funds have been top performers. Fidelity Equity Income II has the top three-year annual returns in the category, averaging 19.8% a year. In the first quarter, the fund fell just 1.43%. Manager Posner uses a value approach, but he still has the freedom to choose growth stocks that don't even pay a dividend as long as the fund's gross yield at least matches that of the S&P 500. "Having that flexibility has been critical," he says.

One equity-income fund that held up well in the first quarter was United Income Fund, which also has the best 10-year record in the group, averaging a 16.9% total return. Manager Russell Thompson, who looks for companies in out-of-favor sectors with little regard to yield, had started buying cyclicals in 1990, believing the market was on its way up.

MORE FUNDS VEER FROM THE MANDATE: THEY PRODUCE LITTLE INCOME—AND DON'T STICK TO EQUITIES

Another more aggressive equity-income offering is Invesco Industrial Income. This fund was formerly headed by John Kaweske, who was fired in January—for failing to report trades made for his personal account in accordance with Invesco's disclosure rules. Now, the fund has two managers: Ronald Lout oversees the part of the fund that generates the yield, comprising convertibles, convertible preferreds, cash, bonds, and utilities. Charles Mayer, who co-managed the fund with Kaweske for nearly a year, runs the remaining 65% of the assets as a diversified growth stock portfolio. The only caveat is that every stock must pay a dividend, even if it's only a tiny one. But Mayer leaves Lout to provide the fund with the "cushion" in down markets.

SHAKEOUT COMING? Some of the equity-income funds operate more in the middle ground. While most prefer blue chips, Royce Equity-Income seeks small-cap stocks with moderate to high dividends. The fund's manager, Thomas Ebright, has chosen this investing philosophy because he says a moderate-dividend-paying company is "a prototype for a long-term growth stock." His fund benefited from the relative strength of small-cap stocks in the first quarter and was down only 1.45%. T. Rowe Price Equity-Income manager Brian Rogers looks for undervalued stocks with higher yields than usual. But he can also pick low-yielding stocks and diversify across sectors. He gets additional yield by holding some bonds and convertible securities.

Traditionalists expect any sustained bear market to produce a shakeout, separating the true equity-income funds from newer incarnations. They believe funds that have veered from the original mandate of buying high-yielding stocks will falter. Whether or not this forecast proves correct, if you venture into the equity-income arena looking for high yield and a defensive posture, make sure that's what the fund you choose has to offer. *Amey Stone*

Smart Money

MAKING THAT BOND HIT LESS PAINFUL

Feeling blue about your bond losses? Try turning them into tax gains. With a bond swap, you can claim the loss for tax purposes without losing your position in the market. It's a neat ploy, but try it only if it makes sense in light of your other financial goals.

Here's how it works: You sell off your bonds, take the loss, and immediately buy similar bonds for the same price. It doesn't matter what the market is doing, because the bonds you sell and buy are affected the same way. You can write off the loss against any capital gains you may have—or against up to $3,000 in ordinary income.

Thus, if you lost $5,000 on the value of your bonds, you would save $1,400 in taxes if you applied the loss against an equal or greater amount of long-term capital gains, which are taxed at a 28% rate. If you're in the 39.6% bracket and use the deduction against ordinary income tax, it would be worth even more—$1,980 in this case. Losses in excess of $3,000 can be carried over indefinitely. That's almost like money in the bank, says Meloni Hallock, senior manager in personal financial services at Price Waterhouse. You can use those losses whenever you want to realize gains in the future.

SWITCHING OUT. When you replace the bonds you sell, you have to be careful to avoid violating the so-called wash-sale rule. This makes it illegal to sell and rebuy "substantially identical" securities within 30 days for tax purposes. With municipals, you can swap bonds that have the same price, maturity, and yield, as long as they come from a different issuer. If you are swapping Treasuries, which are all issued by the federal government, you must replace them with bonds that have a substantially different maturity and interest rate. If you want to buy back the same or very similar bonds, you have to wait 30 days, during which time the market is likely to move.

You can also take advantage of a swap to upgrade the quality or change the maturity of your bonds. In today's climate, where the spread between yields on different quality bonds is small, you can exchange lower-grade issues for higher-grade ones with little sacrifice in income, says Lauren Eastwood, director of research at brokers Gabriele, Hueglin & Cashman. And since interest rates have been rising, you might want to switch out of long bonds into short. But again, you may have to give up some yield.

If you don't have much money in bonds, you may wind up losing any tax advantage to transaction fees, especially in the less liquid muni market, where broker commissions run as high as 5%. The smaller the lot of bonds you're trading, the more expensive it becomes, says James Cooner, senior vice-president for tax-exempt bonds at the Bank of New York. He recommends sticking with lots of more than $100,000. But if you have smaller amounts to invest, you can still employ essentially the same strategy with bond funds: To avoid transaction costs, switch between two no-load funds or funds within the same family, where that's allowed.

Most people wait until the end of the year to make swaps, when they have a clearer picture of the year's gains and losses, says Stev Weinstein, a tax partner individual tax services at thur Andersen in Chica But Gabriele's Eastwood gues that if investors sw now, they'll pay lower dea fees because there's less mand. When "everyone is doing it, it's usually m costly," she says. Also, if market comes back later the year, she points out, may have missed out on opportunity.

CHANCES ARE. The wo thing you can do, howe is swap simply because opportunity exists. Y broader economic consid tions must always come fi For one thing, bond pr have only dropped to wh they were at the beginn of last year. If you inves before then, the chances that you still have m gains than losses.

Even if you invested w interest rates bottomed last fall, you still should first at your financial plan goals. For instance, if plan to hold your bond maturity, you don't hav worry about changes in t value. "This only matters people who trade bond are looking for a certain position," says Price Wa house's Hallock. And t there's the old maxim you should never do anyt for tax purposes alone. A all, you're still better off ing taxes on profits than paying taxes because you money. *Pam L*

ANATOMY OF A BOND SWAP

1 You bought 50 Florida Turnpike Authority municipal bonds (worth $50,000 at par) at a discount of 98, for a total of $49,000. The bonds pay 5% and are due on July 1, 2014.

2 Interest rates rise and the value of your bonds drops from $980 apiece to $865, or a total of $43,250.

3 You sell the bonds and declare a $5,750 loss, worth $1,610 in tax savings if used against a capital gain taxed at 28%, and worth $2,277 if used against up to $3,000 of ordinary income for investors in the 39.6% tax bracket.

4 To maintain your position in the market, you then use the $43,250 to buy comparable bonds trading at $865 apiece, such as Orlando & Orange County Expressway Authority munis paying 5%, due July 1, 2017.

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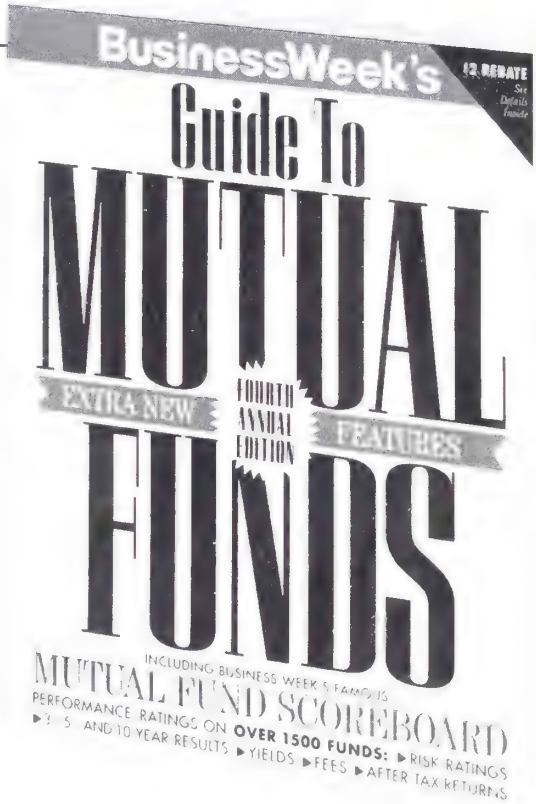

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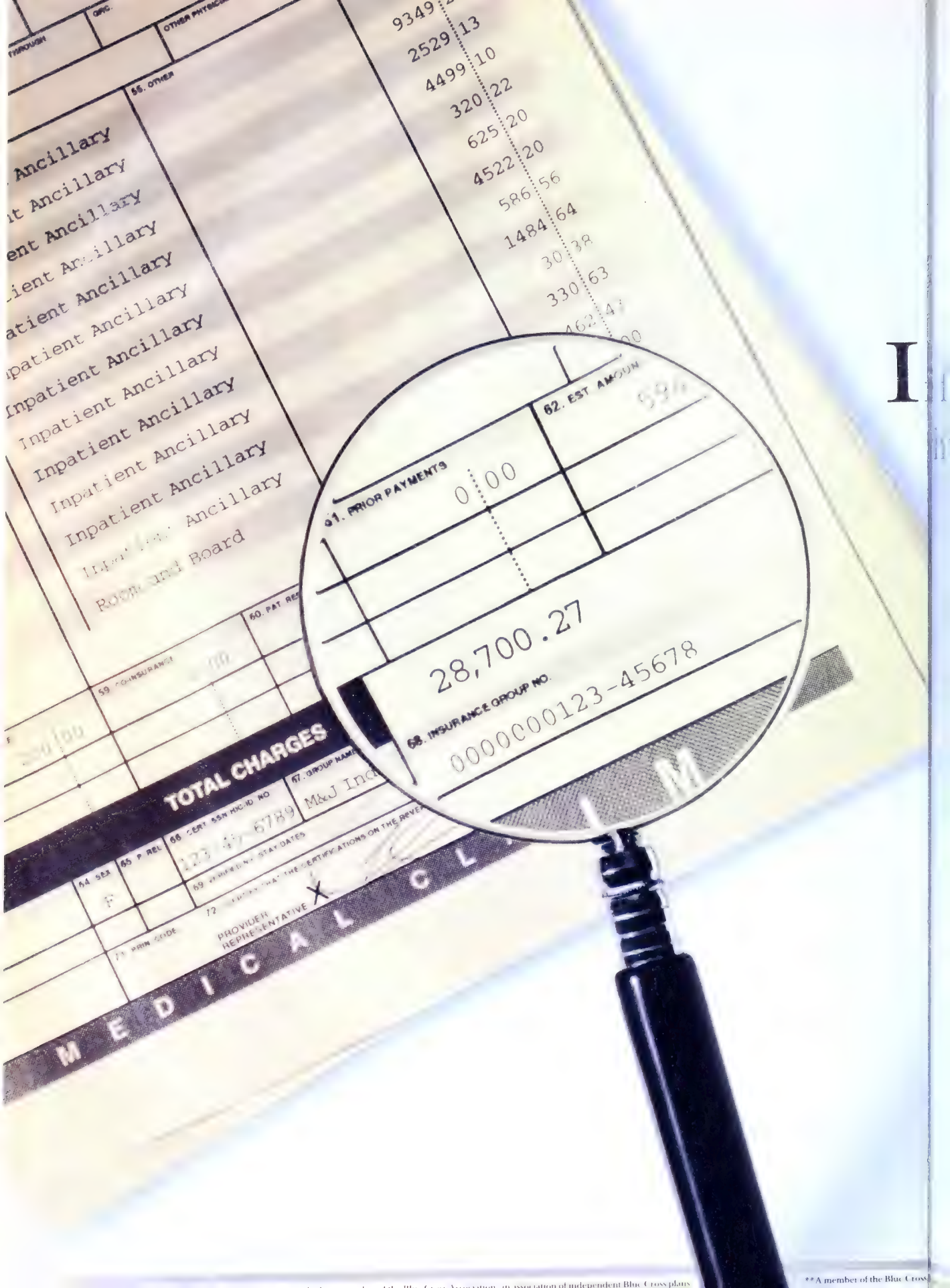
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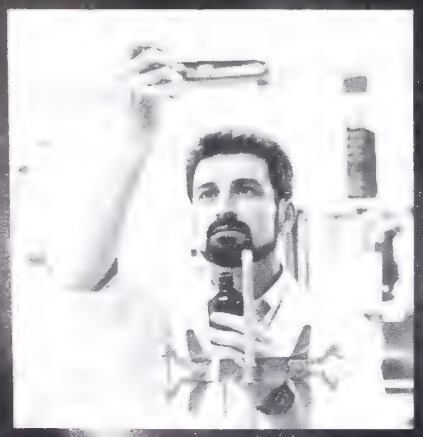

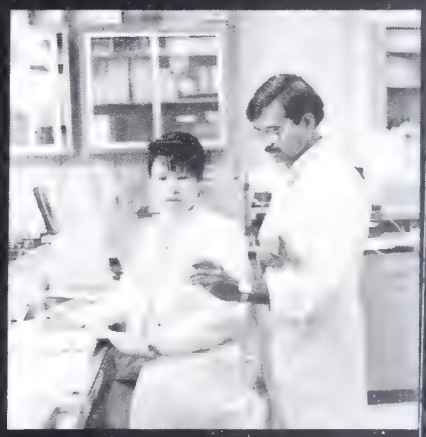

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frican tribal art is one of the richest yet least understood collecting s. For many people, Afri- art still means just sculp- and masks. But collec- can choose from a vast y of objects, including cer- nial clothing, beaded x, carved furniture, and g utensils. With Christie's Sotheby's holding Afri- art auctions in New York lay 5 and 6, respectively, is a good time to look. ecause dozens of African

A-COTTA AKAN HEADS FROM NA CAN GO FOR $500

les each produced distinc- artifacts, identifying and ing their output is chal- ng. Prices can vary enor- sly. Some of the costliest ings are those made by Kota in Gabon and the

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Collecting

OUT OF AFRICA: A BUYER'S MARKET IN TRIBAL ART

Senufo and Baule in the Ivory Coast. Their work influenced artists such as Picasso and Modigliani. The best of such pieces sell at prices approaching $100,000—or more—putting them out of range of most collectors.

On the other hand, well-known pieces are often safer buys: Their provenance is often established European collections, and a consensus has been reached on their quality. Philippe Leloup, who with his wife, Hélène, has galleries in Paris and New York that offer some of the most exquisite and expensive African art, says prices for the top pieces continue to rise, while the middling things have languished. Sotheby's holds the auction record for tribal art: $3.4 million in 1990 for a sculpture of a Bangwa queen.

But you don't have to spend huge bucks to get good things. Eric Robertson, a New York dealer known for eclectic, innovative shows, recommends the works of Nigerian peoples such as the Ibo and Ogoni. Small masks by these groups run from $3,000 to $8,000. Small Yoruba sculptures called *ibejis*, which are memorials to dead twins, cost as little as $1,500. Elegant Akan commemorative heads fashioned from terra-cotta begin at around $500. Household objects such as spoons, staffs, and combs often look marvelously sculptural when mounted: They start at about $100. Theodore Celenko, curator of African art at the Indianapolis Museum of Art, suggests collecting work from northern, eastern, and southern Africa, because these areas have been less picked over than the central and western regions. "You can buy excellent things in all price ranges," says Lisa Bradley, director of Pace Primitive Gallery in New York.

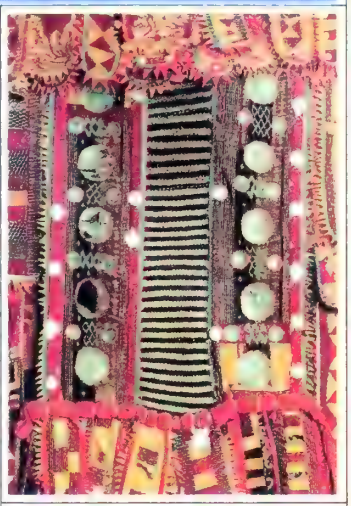
PITFALLS. Starting with lower-priced items may be wise, because African art is full of traps for novices. One problem is making sure objects are genuine. In general, serious collectors want items that have been made traditionally and used in dances or other tribal activity. But authenticity can be hard to verify, especially with African carvers turning out scads of fakes and reproductions. Wear marks on masks or dried blood on objects used for sacrifices may indicate genuineness, but such signs can be faked, too. Poor carving is usually the best tip-off that something isn't right.

SMALL YORUBA SCULPTURES CALLED *IBEJIS*, MEMORIALS TO DEAD TWINS, START AT $1,500

Dealers and experienced collectors advise beginners to develop their eyes by becoming familiar with museum collections, including those of the Metropolitan Museum of Art in New York and the National Museum of African Art in Washington. Informative books include *Art of Africa* by Jacques Kerchache, Jean-Louis Paudrat, and Lucien Stéphan ($175, Harry N. Abrams) and *African Art in the Cycle of Life* by Roy Sieber and Roslyn Walker ($29.95, Smithsonian).

Local museum curators and reputable dealers can be helpful in authenticating work. When you visit a dealer, remember that it is a buyer's market so prices are negotiable. The dealers should guarantee their wares and agree to let you return purchases within an agreed-upon period, in case you change your mind. Ask about possible legal problems. For example, dealers report that the U. S. is now tightening up on antiquities from Mali.

Whether your purchases will soar in value is hard to predict. Robertson thinks that as more collectors come into the tribal-art market, they will drive up prices as they have in African-American paintings and crafts. But the main reason to buy art is because you enjoy it. Making money in this game requires just as much work as in anything else. *Stanley Reed*



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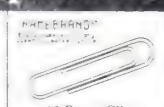

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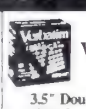

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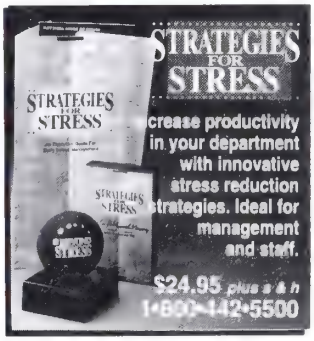

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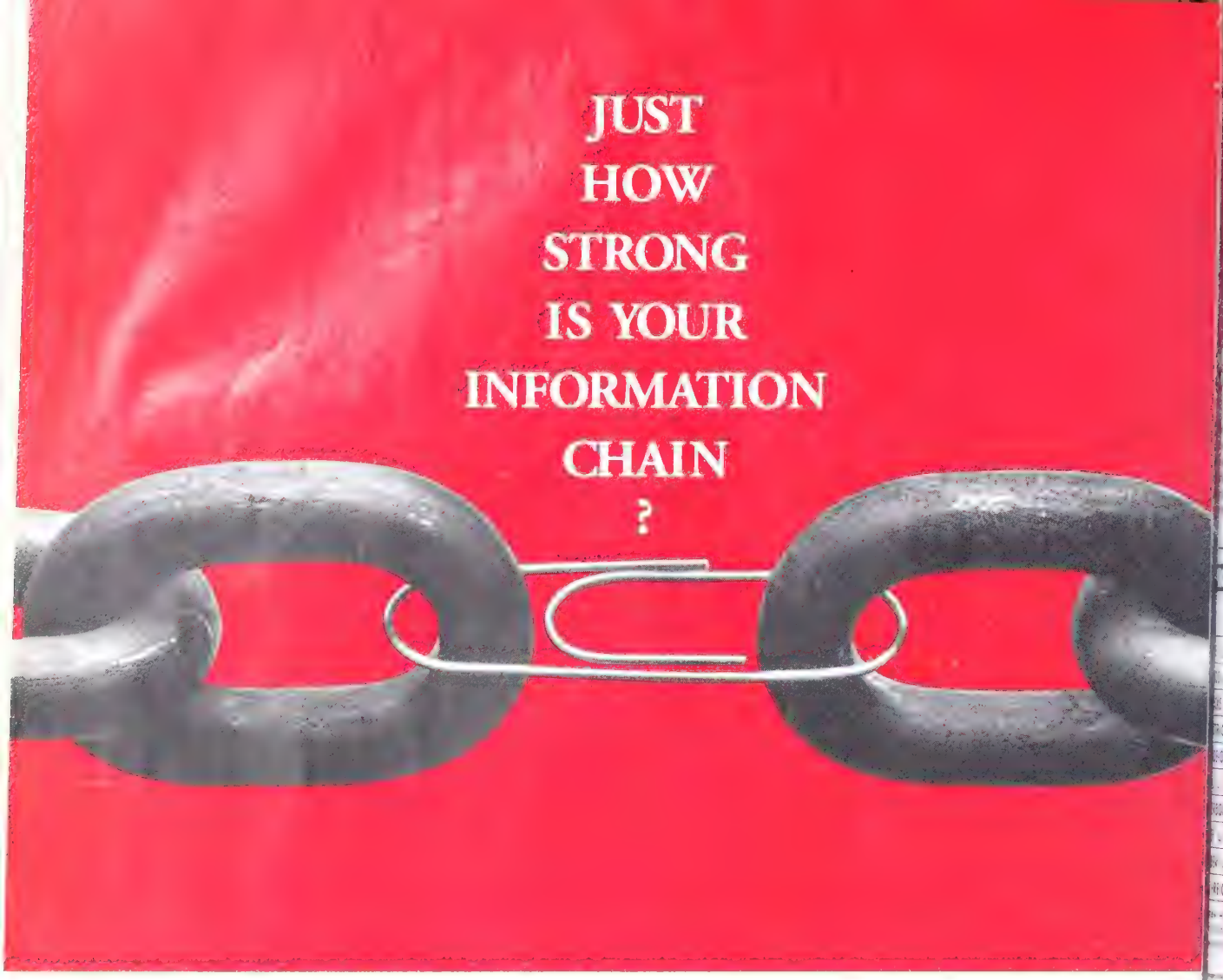

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nge from last week: 0.5%
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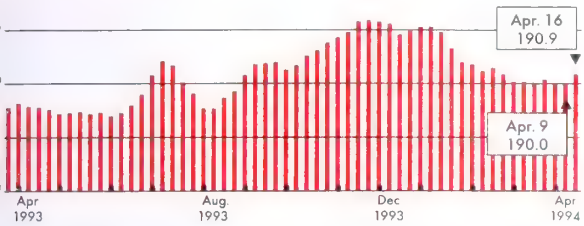
1967=100 (four-week moving average)



production index increased in the week ended Apr. 16. Seasonally adjusted and truck output surged, as plants put in a full week after closings for the er holiday. Coal, electric power, and crude-oil-refining output and rail-freight c also rose. Paperboard production fell, while output levels of steel, paper, and er were unchanged from the previous week. Before calculation of the four-week ng average, the index rose to 193.4, from 189.7.

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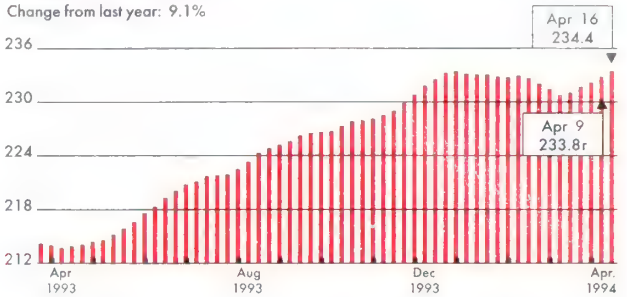
LEADING

Change from last week: 0.3%
Change from last year: 9.1%



The leading index rose during the week ended Apr. 16, as all the available indicators showed stronger economic growth ahead. The indicators were: higher stock prices, lower bond yields, and faster growth rates for materials prices, real estate loans, and M2 money supply. Data on the number of large-business failures were not available. Before calculation of the four-week moving average, the index increased to 236.6, from 234.3.

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RODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
(4/23) thous. of net tons	1,849	1,910#	0.3
S (4/23) units	141,468	145,130r#	8.5
KS (4/23) units	121,156	122,836r#	16.2
TRIC POWER (4/23) millions of kilowatt-hours	53,092	53,302#	3.0
E-OIL REFINING (4/23) thous. of bbl./day	13,974	13,485#	2.2
(4/16) thous. of net tons	21,242#	20,373	12.8
RBOARD (4/16) thous. of tons	826.9#	839.8r	0.3
R (4/16) thous. of tons	832.0#	825.0r	2.0
ER (4/16) millions of ft.	456.6#	464.5	1.7
FREIGHT (4/16) billions of ton-miles	22.7#	21.9	5.1

es: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, can Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association erican Railroads

REIGN EXCHANGE

	Latest week	Week ago	Year ago
ESE YEN (4/27)	103	103	111
AN MARK (4/27)	1.67	1.70	1.58
H POUND (4/27)	1.50	1.48	1.57
H FRANC (4/27)	5.75	5.82	5.34
IAN DOLLAR (4/27)	1.38	1.38	1.27
FRANC (4/27)	1.43	1.44	1.43
AN PESO (4/27)[3]	3.295	3.366	3.117

s: Major New York banks. Currencies expressed in units per U.S. dollar, except for British xpressed in dollars

CES

	Latest week	Week ago	% Change year ago
4/27) $/troy oz.	374.250	371.350	7.0
CRAP (4/26) #1 heavy, $/ton	137.50	137.50	29.1
UFFS (4/26) index, 1967=100	217.0	217.0	5.5
(4/23) ¢/lb.	91.6	90.7	1.7
IUM (4/23) ¢/lb	61.3	62.6	19.5
(4/23) #2 hard, $/bu.	3.59	3.60	0.8
(4/23) strict low middling 1-1/16 in., ¢/lb	77.68	75.82	37.3

: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* insas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (4/22) S&P 500	444.66	447.25	0.5
CORPORATE BOND YIELD, Aaa (4/22)	7.93%	7.87%	8.0
INDUSTRIAL MATERIALS PRICES (4/22)	98.7	98.1	1.4
BUSINESS FAILURES (4/15)	NA	NA	NA
REAL ESTATE LOANS (4/13) billions	$424.4	$422.1r	3.9
MONEY SUPPLY, M2 (4/11) billions	$3,562.3	$3,549.9r	3.5
INITIAL CLAIMS, UNEMPLOYMENT (4/9) thous	350	336	5.4

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
EXISTING HOME SALES (Mar.) millions	4.06	3.84r	18.4
HOUSING STARTS (Mar.) annual rate, thous	1,473	1,314	34.9
BUDGET SURPLUS OR DEFICIT (–) (Mar) millions	–$32,315	–$41,566r	–26.5
CONSUMER CONFIDENCE INDEX (Apr.)	91.7	86.7	35.7

Sources: National Association of Realtors, Treasury Dept., Conference Board

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (4/11)	$1,143.5	$1,148.1r	9.5
BANKS' BUSINESS LOANS (4/13)	286.9	288.8r	4.4
FREE RESERVES (4/13)	781r	783r	–3.1
NONFINANCIAL COMMERCIAL PAPER (4/13)	150.2	150.7	–0.8

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (4/26)	3.42%	3.71%	2.87%
PRIME (4/27)	6.75	6.75	6.00
COMMERCIAL PAPER 3-MONTH (4/26)	4.14	4.12	3.11
CERTIFICATES OF DEPOSIT 3-MONTH (4/27)	4.09	4.12	3.08
EURODOLLAR 3-MONTH (4/22)	4.09	3.89	3.09

Sources: Federal Reserve, First Boston

ta in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
rn Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

THE BURNING MUST STOP. NOW!

The world's rain forests are burning. And a wealth of wildlife is trapped in the fire's path.

Rain forests occupy just 2% of the earth's surface. Yet these rain forests are home to half of the planet's tree, plant and wildlife species. Tragically, 96,000 acres of rain forest are burned every day.

You can help stop this senseless destruction. Right now you can join The National Arbor Day Foundation, the world's largest tree-planting environmental organization, and support Rain Forest Rescue.

When you join, you will help establish natural rain forest barriers to stop further burning and support on-site conservation management plans to protect threatened forests.

Each and every second, a rain forest area the size of a football field goes up in smoke. You'd better call now.

Rain Forest Rescue

The National Arbor Day Foundation

Call Rain Forest Rescue NOW.
1-800-255-5500

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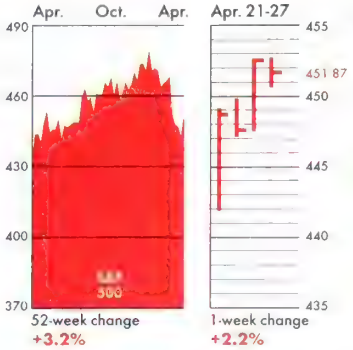
vestment Figures of the Week

ENTARY

nbination of good earnings and falling interest rates cks higher, with the bat- nall caps showing the gains. Emerging market also rebounded, as bot- ers snapped up punished The critical factor remains tion outlook, and two rs are flashing good ead: The Commodities h Bureau index fell 3% month, through Apr. 27. d prices dropped 4%.

STOCKS

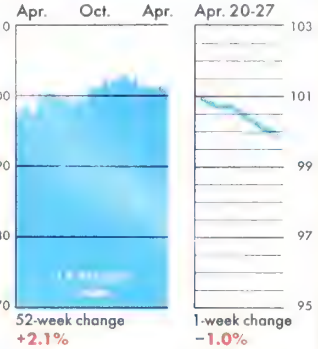


52-week change +3.2%
1-week change +2.2%

BONDS

52-week change −3.9%
1-week change +2.2%

THE DOLLAR



52-week change +2.1%
1-week change −1.0%

RKET ANALYSIS

TOCKS	Latest	% change Week	52-week
ONES INDUSTRIALS	3699.5	2.8	8.4
COMPANIES (S&P MidCap Index)	172.3	3.5	8.4
COMPANIES (Russell 2000)	251.0	3.6	13.8
MPANIES (Russell 3000)	261.0	2.4	4.4
GN STOCKS	**Latest**	**% change (local currency) Week**	**52-week**
(FINANCIAL TIMES 100)	3150.0	1.7	12.6
(NIKKEI INDEX)	19,729.2	−0.8	−3.5
O (TSE COMPOSITE)	4287.8	4.4	15.6

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	3.98%	3.83%	2.98%
30-YEAR TREASURY BOND YIELD	7.11%	7.32%	6.92%
S&P 500 DIVIDEND YIELD	2.78%	2.94%	2.85%
S&P 500 PRICE/EARNINGS RATIO	20.1	19.9	22.0

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	464.4	464.8	Negative
Stocks above 26-week moving average	28.9%	25.7%	Neutral
Speculative sentiment: Put/call ratio	0.41	0.52	Positive
Insider sentiment: Vickers sell/buy ratio	1.80	2.06	Positive

USTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

WEEK LEADERS	% change 4-week	52-week	Strongest stock in group	% change 4-week	52-week	Price
CCO	6.3	11.9	AMERICAN BRANDS	12.1	8.2	34⅝
EHOLD PRODUCTS	3.5	9.3	UNILEVER	5.1	−2.1	113
ERTY-CASUALTY INSURERS	3.1	−3.9	GENERAL RE	6.4	−4.3	112¼
ESTIC OIL	3.0	−6.6	PHILLIPS PETROLEUM	13.7	8.9	32⅛
ONAL TELEPHONE COMPANIES	3.0	3.1	BELLSOUTH	8.8	14.7	61⅝
WEEK LAGGARDS	**% change 4-week**	**52-week**	**Weakest stock in group**	**% change 4-week**	**52-week**	**Price**
BUILDING	−15.6	1.4	KAUFMAN & BROAD HOME	−19.7	1.4	17⅞
MINING	−15.5	13.7	PLACER DOME	−19.3	22.6	20⅜
S AND MOTELS	−12.0	36.0	PROMUS	−12.8	54.2	36⅝
INE TOOLS	−11.5	−8.5	CINCINNATI MILACRON	−13.9	−19.3	20⅞
FACTURED HOUSING	−11.3	7.8	SKYLINE	−16.0	−1.9	19

UAL FUNDS

MORNINGSTAR INC

S

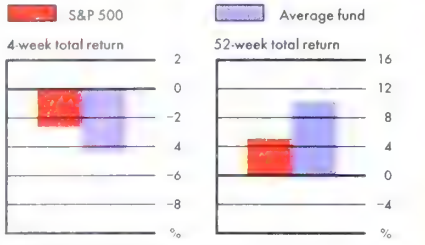
total return	%
T EQUIFUND ITALIAN NATL. FID. EQUITY	12.5
BARNEY SHEARSON TELECOMM. INCOME	4.9
Y SELECT REGIONAL BANKS	3.4

otal return	%
R INTERNATIONAL GROWTH A	47.9
TON STRATEGIC INVESTMENTS	47.2
MIDAS GOLD	45.7

LAGGARDS

Four-week total return	%
MONITREND GOLD	−19.7
BENHAM GOLD EQUITIES INDEX	−18.9
G.T. LATIN AMERICA GROWTH A	−18.0

52-week total return	%
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−25.2
MONITREND GOLD	−25.1
EXCEL VALUE	−21.6



TIVE PORTFOLIOS

DRI/McGRAW-HILL

ounts
the present
$10,000
one year ago
ortfolio

es indicate
tal returns

Foreign stocks
$12,210
+0.09%

Gold
$10,652
+0.32%

U.S. stocks
$10,604
+2.11%

Treasury bonds
$10,371
+2.80%

Money market fund
$10,203
+0.04%

his page are as of market close Wednesday, Apr. 27, 1994, unless otherwise indicated. ps include S&P 500 companies only; performance and share prices are as of market close Apr. 26. Mutual fund returns are as of Apr. 22. Relative portfolios are valued as of Apr. 26. A more detailed explanation of this page is available on request.

NIXON: A TATTERED ECONOMIC LEGACY

In 1971, right after Richard Nixon imposed wage and price controls and established the U. S. Price Commission, he called one of its members, Robert F. Lanzillotti, to say that he was unable to attend the scheduled working lunch. He then proceeded to walk into the room where the board was eating, a dazzling Imelda Marcos on his arm. "You can't blame me for missing a boring meeting—now can you?" he said to a stunned Lanzillotti.

To Nixon, foreign affairs was the most exciting part of a President's job. In that, he was the policy opposite of Bill Clinton. While Clinton's foreign policy appears to be an ad hoc collection of afterthoughts, Nixon's domestic policy was a potpourri of stop-gap measures.

This is especially true of economic affairs. Sins of commission and omission leave behind an unexpectedly sour economic legacy. Taken as a whole, the Nixon years set the nation on a course of inflation that was to culminate in the blowout of the late Seventies.

It began in 1969, when Nixon took office and continued Lyndon Johnson's policy of fighting a war in Vietnam without raising taxes to pay for it. To combat the resulting inflation, Nixon imposed government controls on wages and prices. Persuaded by Federal Reserve Chairman Arthur F. Burns, Nixon went against virtually all his other economic advisers. Yet he took little interest in the controls and the wall of inflationary pressures building up behind them. At council meetings, he preferred to talk about China. In the end, when controls were lifted, price pressures exploded.

Ironically, Nixon imposed controls because he was afraid inflation would hurt his chances in the 1972 Presidential e tion. This kind of political calculation was at the heart of deal he cut with Wilbur Mills, then House Ways & Me Committee chairman and Democratic Presidential aspira for a huge 20% hike in Social Security benefits that y The move, which built in a significant increase in manda entitlement costs, is felt to this day.

In 1971, Nixon took the dollar off the gold standard—p ably a necessary move. But then the Organization of Pe leum Exporting Countries rammed through a fourfold in oil prices in 1973, sending an inflationary wave thro the world economy. Nixon couldn't have foreseen the hik energy prices, but "his" Fed, under Burns, chose to acc modate the surge with monetary expansion. It was at point the U. S. began to really lose its competitive e against Japan, which chose to hang tough against infla By the time Nixon resigned in 1974 because of Waterg U. S. inflation was at 12%.

On the plus side, it took unusual bravery for a Rep can President to establish the Environmental Protec Agency, the Occupational Safety & Health Administra and the Equal Opportunity Commission. The resulting ulatory cost may have contributed to inflation over the y but on balance they led to needed social change.

In the end, Nixon attempted to rehabilitate himself i eyes of the nation through his foreign policy work and ings. He cared little for economic policy in the last 20 y of his life. He cared even less for it during his years i White House.

STAY THE CORPORATE AX—WITH GROWTH

It's a most bizarre contradiction. American corporations are enjoying terrific profits, with earnings-per-share the best in years. Yet companies are laying off employees in record numbers—over 3,000 a day. In the U. S., layoffs by big companies in April alone are running 77% ahead of last year.

The axman truly cometh, and not only in the U. S. Throughout the globe, both profit-making and profit-losing corporations are shedding employees fast. Layoffs are sweeping government-owned companies in Russia and China. They are occurring in newly privatized companies in Argentina and Mexico, as well as once powerful German and French companies. Even in Japan, Toyota Motor Corp. and Toshiba Corp. are scaling back.

What's going on? Call it downsizing, call it reengineering. Everywhere, large, bureaucratic businesses are getting thinner. What looked like a temporary, recession-driven, made-in-the-USA slim-down is turning out to be a permanent international phenomenon. In essence, a new postmodern corporation is being born before our eyes.

The pain of transition strikes with fine impartiality, middle managers at Ford Motor Co. to line workers a the Russian car manufacturer. Ten years ago, a billion ple were tied into the international market system. To is 5 billion.

Massive flows of goods, capital, and labor are raisin competitive ante. In the new capitalism, once dominant panies find themselves too heavy and slow to con against rivals.

Enter technology. A world of 2% productivity gro America today—is a vastly different place from one wi productivity growth—America yesterday. Yet with the diffusion of technology across borders, workers are bein as fast in Poland as in America.

What is the antidote to this bloodletting? Growth, gr and more growth. Sharply rising productivity and ex ing trade are providing an opportunity to notch it up out fanning the flames of inflation. There is a global ra ing place between job destruction and job creation. race that can be won.

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Airline
Miles
per stay

1,000
Hotel
Points
per night

stin premier privileges] We wouldn't think of forcing you to choose (as others do)
een airline miles and hotel points. As far as we're concerned, you deserve to earn them both.
ervations or more information on the Westin Premier program, call your travel consultant or (800) 228-3000.

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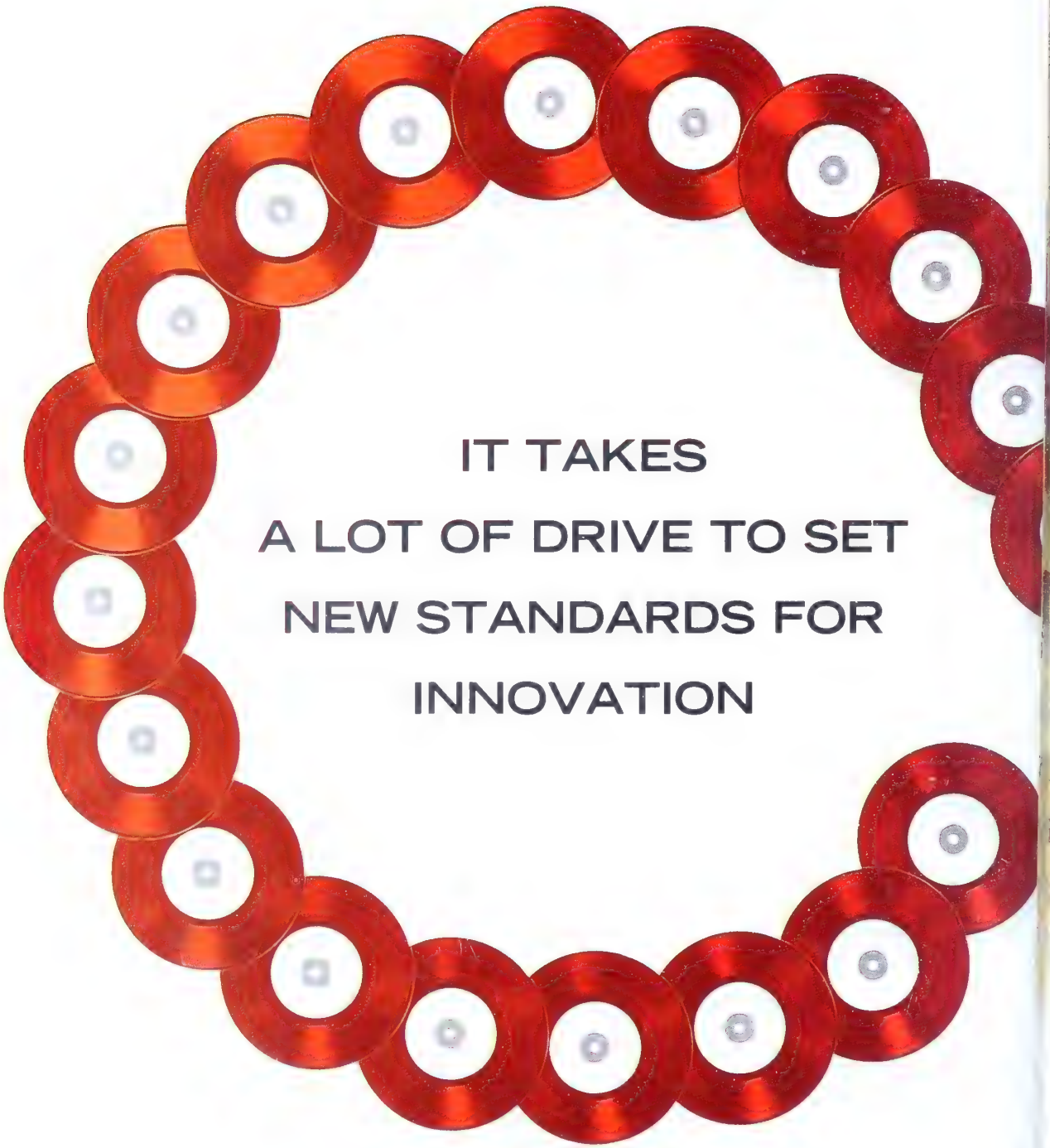
HOTELS & RESORTS


IT TAKES
A LOT OF DRIVE TO SET
NEW STANDARDS FOR
INNOVATION

OFITS FIRST QUARTER RESULTS FOR 900 COMPANIES
STRATEGIES ▶IBM ▶KODAK ▶ROCHE/SYNTEX
DERIVATIVES COMPANIES HIDDEN EXPOSURE
NESS WEEK
May 16

BusinessWeek
16, 1994 A McGRAW-HILL PUBLICATION 75

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WHY ARE WE SO AFRAID OF GROWTH?

Conventional wisdom holds that the U.S. economy can't sustain rapid growth without inflation. But that may be wrong. The reason:

A wave of innovation is boosting productivity while global competition is keeping prices down. PAGE 62

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WHAT IF you can't afford to buy all of your furniture at onc

A l[illegible]re budg[illegible]ort-
ably tight these days.

And maybe you've considered squeezing a few more years out of your old, uncomfortable office chairs.

Composites Guest Chair

Or squeezing your employees into "bargain" furniture that doesn't fit your needs.

Generally, such cost saving measures cost more than they save. Which is why you should consider some alternatives from Haworth.

Whether you're looking for seating, open plan systems, desks or files, we offer a wide selection to suit your company's style and budget. With a variety of financing and leasing plans to help cushion your cash flow.

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[illegible] Executive Swivel Chair

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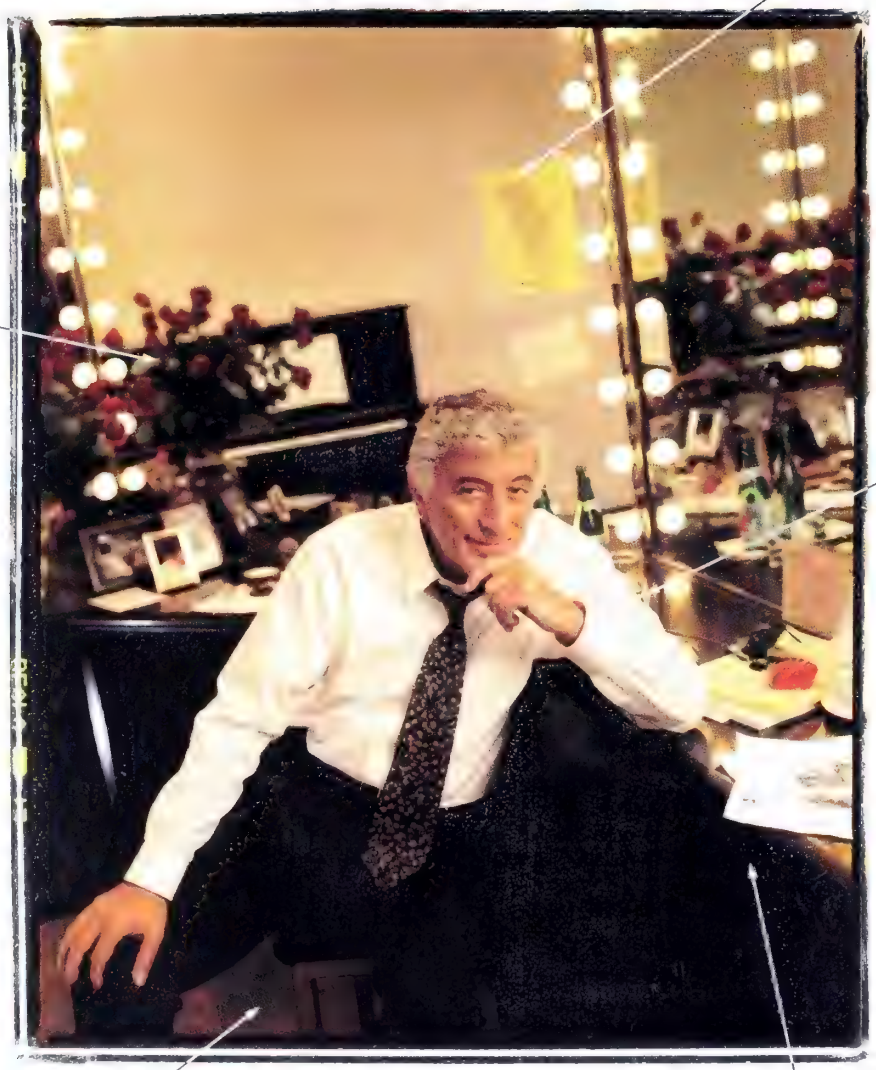
TONY BENNETT/at work

The set list.
It's all about finding the right tempos,
the right nuances. Sound easy?
"It took me ten years to write this list."

The flowers are a
reminder of the great
Duke Ellington,
who would send a dozen
roses whenever he'd
written a new song.



The dressing room at
Radio City Music Hall
is a place Tony is intimately
familiar with.
No wonder, since he lives
only a block away.

Tony Bennett's art isn't limited to singing,
as these sketches show. His favorite
subjects are other performers.
"I always paint from life and 98%
of the time I'm around musicians."

Mr. Bennett has graciously donated his appearance fee to the Juvenile Diabetes Foundation

"I like it understated, I don't like it obvious."
It's a philosophy that's apparent in Tony's clothing
as well as his music. Case in point:
his classic white Arrow 1851 wrinkle-free dress shirt.

uett Peabody, Co., Inc.

at work/at play

BusinessWeek

NUMBER 3371 MAY 16, 19

CAN INNOVATION FEND OFF INFLATION? SOME ECONOMISTS SAY YES, CITING THE "CREATIVE DESTRUCTION" WROUGHT BY NEW TECHNOLOGIES

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As the U. S. economy powered ahead last year, financial markets, forecasters, and the Fed hit the inflation alarm. But are their fears justified? The wave of innovation and productivity gains across Corporate America over the last decade point to a historic transformation—one that may force economists to rewrite the rules

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Economists who believe in an expanding universe

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A business Uncle Sam should back

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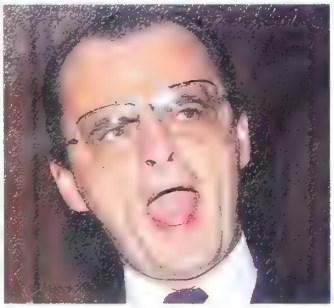
Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

TALK SHOW

A year ago we were a demonized industry. Now, we're less demonized.

—Sheldon Gilgore, head of the drugmakers' rechristened trade group, the Pharmaceutical Research & Manufacturers of America



SHUGRUE: *$100 million, please*

WING AND A PRAYER

EASTERN: THE CORPSE THAT WOULDN'T DIE

Can grounded Eastern Air Lines take off again—and can Martin Shugrue keep his lucrative berth in the pilot's seat? Looks like the weather is awfully heavy. Shugrue, Eastern's trustee in bankruptcy, unveiled plans Apr. 28 to resurrect the Miami-based carrier by using some of its 53 former planes mothballed in the Arizona desert—which belong to creditors—to start a low-cost airline.

Shugrue wouldn't return calls to discuss his idea. Many airline analysts see plenty of hitches, doubting he can raise the needed $100 million. Eastern's unions would likely argue that their costly contracts would be valid even at a "new" Eastern. And debtholders, who must O. K. his plan, are critical—especially unsecured creditors, who may see little or none of their $1.5 billion in claims. They're still angry that Eastern under Shugrue has burned through $500 million since he started in April, 1990. (Eastern stopped flying in January, 1991.)

Skeptics deride the scheme as the "Marty Shugrue Employment Extension Plan." His salary in this temporary job has bounced around between $30,000 and $50,000 monthly. But though Shugrue isn't kidding, his first court filing about the plan was April Fool's Day. *Gail DeGeorge*

SPLITSVILLE

ANOTHER HAIR-RAISER AT THE HAFTS

Suddenly, Dart Group—holding company for the feuding Haft family—isn't doing so well. On Apr. 29, Dart's Crown Books unit, the nation's No. 3 bookseller, reported a $1.9 million fourth-quarter loss and a $200,000 loss for the year, despite a 15% revenue rise. Crown had posted steady profits since its 1977 founding. Same story for Dart's Trak Auto car-parts chain, where earnings dove 98%, to $81,000, for the year. Dart says that's partly due to opening costs for superstores.

But Haft confidants and Wall Street skeptics say Herbert Haft, Dart's chairman, is choosing now to take these accounting hits as a stratagem in his bitter pending divorce from Gloria Haft, his wife of 47 years. The trial, set for May 23, is in Washington, D. C., where the courts tend to split property 50-50. By driving down the value of family holdings—Crown stock tumbled 6%, to a 52-week low of 17, on Apr. 29—Herbert could more cheaply achieve his expressed goal of buying out Gloria. Neither Herbert nor Dart execs could reached for comment.

A truce is unlikely. In positions, Herbert evokes t Bobbitts, stating Glo threatened to kill him and off his penis. *Mark Lew*

LAST WALTZ? *The Hafts*

RED SQUARE: *Coke thinks there's yuppies out there*

NEW WORLD ORDER

ROLL OVER, LENIN: THE COLA WARS HIT RUSSIA

In Russia, the cold war is over, but the Cola Wars are heating up. Coca-Cola opened its first wholly owned factory on Apr. 25, outside Moscow—part of a come-from-behind fight against PepsiCo for this huge market. Pepsi, the largest non-Russian soda marketer, began bottling there in 1974 and now controls almo an 11% share. Coke produc which started a big push o in 1991, have 5% to 7%.

Pepsi is handicapped by links to the Soviet past. A Coke's aggressive ad ca paign has won over Russi young business types, says poll by Roper Starch Wor wide. Pepsi is fighting ba by boosting Russian produ tion and running Pepsi Gen ation-style ads. Pepsi al scored with young consume by sponsoring a Michael Ja son concert in Moscow l fall—although Coke guerrill handed out Coca-Cola flags the entrances. *Patricia Kr*

REALITY CHECK

CABLE OPERATORS SAY the Federal Communications Commission has hobbled them badly by ordering the industry to cut basic rates 7%. They complain that the FCC action has killed their cash-flow projections. And that, they say, has hurt development of the Information Superhighwa by helping scuttle two of the year's biggest deal the Bell Atlantic-Tele-Communications merge and the joint venture proposed be tween Southwestern Bell and Co Enterprises.

IN REALITY, the FCC's ruling isn't that bad for the cable industry. It doesn't regulate a big growth area, pay-per-view. And it has features aimed at spurring investment. Under the old setup, if a cable operator wanted to add a new channel, the operator could only charge the average price of all channels. That encouraged cable operators to add cheap low-quality channels, assuming the added them at all. Under the new scheme, cable operators can pas through the full cost of a new chan nel, plus a 7.5% profit. The upshot: Operator can add more and better channels, not to mer tion more profitable ones. *Mark Lewy*

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Up Front

DUTCH TREAT

THE DAY THE BEER RAN BACKWARDS

Coals to Newcastle, Heineken to Holland. Amsterdam-based Heineken, which makes more beer worldwide than anyone except Anheuser-Busch, had to import 1.8 million gallons of its brew because of a strike just before the Apr. 30 celebration of Queen Beatrix's birthday. On this day of national celebration, the Dutch flock to town squares and quaff Falstaffian quantities of suds. Heineken and its related brand, Amstel, account for more than 50% of the Dutch market.

Quick-thinking Heineken management put a secret "import" plan into action after depleting local stocks, including a warehouse of beer in Rotterdam headed for the U. S. The company repatriated beer from some of its 90 breweries worldwide—85% of the domestic production of the struck plants. You could tell the diff: Non-Dutch Heineken comes in a green bottle, the domestic beer in a brown one. It all poured gold, however, and bars had no complaints from thirsty revelers. *Patrick Oster*

TOASTING THE QUEEN: *Heineken saved the day*

WINDY CITY MAILSTROM

BUY A STAMP, HELP FURNISH A DREAM OFFICE

Something is staying Chicago's couriers from their appointed rounds. In the city's Lakefront neighborhoods, mail can take several days to travel a couple of miles downtown. That's if it's delivered at all: 20,000 pieces of mail were found in a basement of a house once owned by a letter carrier. Another carrier's delivery truck held a second missing batch. Worse, a bunch of letters ended up burning in a field. The remedy, critics feel, is better management.

So Chicagoans weren't amused when news broke recently that the Post Office has spent a good chunk of change renovating the office of local mail-processing chief Celestine Green. The $200,000 workplace redecoration involved a large bathroom replete with a whirlpool and a big kitchen. The U. S. Postal Service says that it uncovered the situation late last year, sent back some of the plush suite's furniture, and converted it to a conference room. There's no word on what happened to the whirlpool.

GREEN: *Out*

Hoping to turn things around, U. S. Postmaster General Marvin Runyon on May 2 reassigned Chicago's postmaster, Jimmie Mason, to Columbia, S. C., and Green to the Chicago suburbs. Mason and Green would not comment. *Kevin Kelly*

DRAWN AND QUARTERED

WATCHDOG WOES

EPA, PROTECT THYSELF

Environmental Protection Agency staffers say they know about indoor air pollution first hand: They kvetch that EPA's Washington headquarters has a lousy ventilation system that makes them sick. So the agency, after two decades at its six-building Waterside Mall complex n the Potomac River, is mov almost a mile away to Pe sylvania Avenue. The exod begun recently, is in sta over the next four years space becomes available.

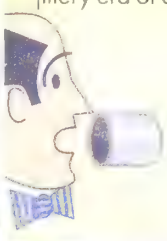
Underscoring the agen predicament is a Dec. 23 ji

award of $948,000 to five staffers who blame Waters Mall for ailments that ra from eye irritations to an ability to concentrate. landlord and the managem company, who are the de dants, are trying to get t overturned, arguing that jury didn't conclude that five were physically harm The landlord says private government tests show n ing wrong with Waterside

At any rate, it's a com to staffers that the new have one edge over the rent HQ: windows that op At Waterside, the EPA bi are among the few with t privilege. *Mary Beth Re*

THE BIG PICTURE

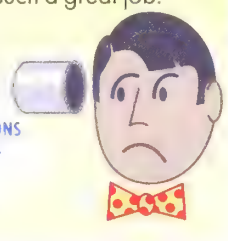
HELLO...? Companies claim they are improving communications with employees in this jittery era of downsizings. But a recent survey shows that they're not doing such a great job.



EMPLOYEES POLLED SAY THEY:

DON'T BELIEVE WHAT MANAGEMENT SAYS	AREN'T WELL-INFORMED OF COMPANY PLANS	DON'T GET DECISIONS EXPLAINED WELL
64%	61%	54%

DATA: COUNCIL OF COMMUNICATION MANAGEMENT SURVEY OF 705 EMPLOYEES AT 70 COMPANIES



FOOTNOTES

Cumulative earnings since 1949, U. S. airlines. 1989: **$8.26 billion.** 1991: **$2.4 billion.** 1992: **-$1.62 billion**

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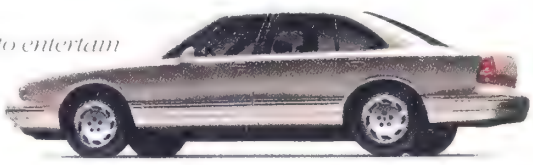

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I'm holding a compass.

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wiggles,

jiggles.

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Readers Report

A LITTLE INVESTOR'S SAD SONG

Your article "Burned by Merrill" (Finance, Apr. 25) indicates that many older investors lost money on misrepresentations by Merrill brokers. Well, they also went after young ones.

In 1987, my Merrill broker recommended that I invest in Arvida/JMB Partners LP II for my 5-year-old daughter. He noted JMB's fine record and said that since her college days were far in the future, it would be a safe bet that the profits would pay her tuition. My daughter's net assets at the time were a little over $11,000, most of which had been a gift from her grandfather.

When Arvida II came out, the Merrill broker was after me to buy it also. He sent me a note stating, in part, that Arvida I projected 12% in the first year but delivered 13% and was expected to achieve 15% for 1989. He closed with the statement: "The importance of JMB to your chance for success cannot be overestimated." Luckily, I didn't swallow again.

Obviously, my daughter will not enjoy a tidy sum for her college education. Or do you think Merrill's CEO, who you pointed out in the same issue is one of the most highly paid executives in Corporate America, might give her a scholarship?

Ronald A. Weber
Reston, Va.

THE STEAM OVER EXECUTIVE PAY

Like a child inadvertently exposed to pornography, I stumbled upon "That eye-popping executive pay" (Special Report, Apr. 25). These numbers, these blatant, white-collar crimes against the psyche, make a mockery of the toil of ordinary men.

What is taking place is not just a massive transfer of dollars from the public to an elite minority but a shift of economic and political power. With the determination and selectivity of the amoeba, the few are accumulating a wealth of power in sickening disproportion to the many. The mesmerized m
jority unwittingly gives up a portion
their vested interest in America wi
each passing day—with every suck
one more cool drink, with every queu
up for one more fun-ride.

Thomas Howa
Atlan

Regarding your article: Is anybo
worth that much? Perhaps, but W
and Roy Disney have long left us no
Not to discredit Michael Eisner for h
achievements (EuroDisney isn't one
them), but the entire entertainment i
dustry was poised to take off duri
the past 10 years.

Joseph E. Jasiens
Tekonsha, Mi

Your article made fascinating rea
ing. But your reporters by a
large missed the point. The issue is
productivity. It is not risk-taking. It
not judgment. It is not value adde
And it is not the globalization of t
economy. The issue is power.

These guys, who quadrupled their
ative pay in the past two decades a
now on average earn almost 150 tim
more than their employees, have t
power to dictate what they are pa
They don't let the "company" or mi
governmental agencies or [institutio
investors such as] the California Pub
Employees Retirement System dict
the terms. They are the pipers who
the tune.

For years now, company direct
(frequently active or retired CEOs)
the CEOs have been collectively thu
ing their noses at the rest of soci
with respect to compensation.

Thierry F. Koe
Los Alamitos, Ca

Hillary Rodham Clinton m
$100,000 in nine months. One exe
tive made that much in 1½ hours. s
posedly all legal.

It seems to me that the media is
cusing on the wrong story. Most o
can identify with $100,000, but the
of CEOs is way beyond comprehensi
being paid more in an hour than 95%
us make in a whole year. No ma

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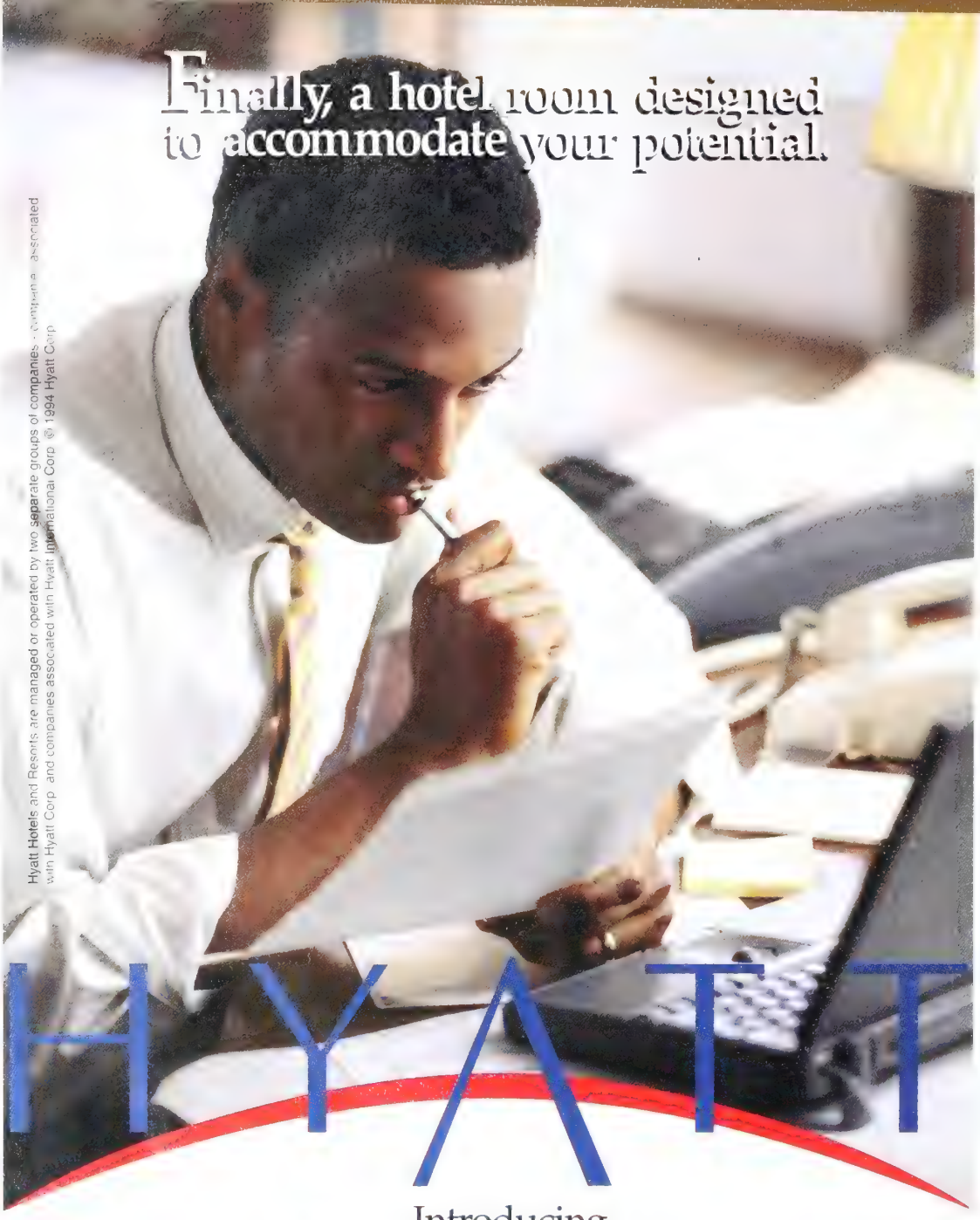

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Albert Bavaria
Miami

A BLAST OF CADILLAC EXHAUST

I find your article "Does this new Caddy play it too safe?" (Personal Business, Apr. 25), confusing and shallow.

You seem to be unaware that some features you listed as new for the '94 Cadillac Deville were standard equipment on the '93 Deville.

The piece discusses the Concurs as if it's a new concept. It isn't. The Concurs is simply a new name for a model that was known as the Touring Sedan last year.

I am a Cadillac enthusiast, but I'm disappointed in the bloated, bulky look of the new Deville. Instead of sleek and trim, it looks portly. A Cadillac should radiate what its owner wants to be—not what he is.

Stephen Clifford
Beulah, Mich.

HOW TO KEEP A TETHER ON THE ECONOMY

In the article "Needed: A one-two punch from the Fed and Treasury" (Economic Viewpoint, Apr. 25), Rudi Dornbusch sugests that the Federal Reserve "has to raise short-term interest rates significantly to keep the economy from overheating" and "the Treasury must intervene to bring down and stabilize the yield on 10-year bonds." He seems somewhat confused.

His "answer to this predicament is for the Fed to hike the federal funds rate and the discount rate by 50 or even 75 basis points" and "specifically, the Treasury should buy 10-year bonds . . . to push their yield back down to a more normal level—say 5%."

The confusion is twofold: One is that the Treasury can conduct its own monetary policy by buying bonds. The question is, where will the Treasury get the money to buy bonds? It has no excess funds because of the existing budget deficits. In order to get funds for this purpose, the Treasury would have to sell new securities to finance the purchases of bonds. Borrowing from Peter to pay Paul.

If the Treasury decided to sell new bonds to buy existing 10-year bonds, it would be working at cross-purposes and would have virtually no effect on bond rates.

If, on the other hand, the Treasury decided to sell short-term bills to finance the purchase of 10-year bonds, it would be infringing on the the central bank's role in conducting monetary policy. Perhaps what Dornbush intended was that the Fed should sell Treasury bills to raise short-term rates and buy bonds to reduce long-term rates. Supposedly, higher short-term rates would help fight inflation and lower long-term rates would help promote economic growth. In other words, flatten out the yield curve for Treasury securities.

Dornbush also assumes that the financial markets would be passsive onlookers throughout this entire procedure. Investors have recently shown that they will decide what the slope of the yield curve should be.

Louis Manzell
Monmouth College
West Long Branch, N. J.

CORRECTIONS & CLARIFICATIONS

In "The Merck marathon: Back to the starting line" (Top of the News, May 9), Richard J. Markham was incorrectly identified. He is president of Marion Merrell Dow Inc.

"Your ticket to the privatization party" (Personal Business, Apr. 18) mistakenly included Banco Comercial Portugués in a table of privatized companies.

THE FIRST COMMODITY TRADER

Regarding "Hillary Clinton, go-go-getter" (Top of the News, Apr. 18), President Rodham's commodity trading was wholly proper in every particular.

Robert B. Meredith
Mill Valley, Calif.

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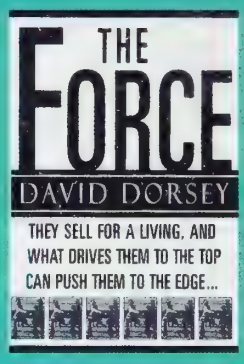
THE FORCE
By David Dorsey
Random House • 315pp • $23

LOST SOULS OF A SALES MACHINE

One of the most famous exchanges in drama takes place at the end of Samuel Beckett's *Waiting for Godot*. Having loitered for days, hoping the mythical Godot will arrive and relieve them of their misery, Estragon turns to Vladimir and says: "I can't go on like this." Comes the chilling reply: "That's what you think." Thus Beckett sums up the modern age: We, the tortured, alienated, and lost, await our savior, who never comes. And yet, no matter how maddening the wait gets, we wait.

The barren landscape inhabited by Beckett's Everyman isn't unknown to the players in David Dorsey's fine book *The Force*. The author, who spent a year trailing a Xerox Corp. Cleveland sales team—one of the company's hottest—details the lives of men and women maniacally driven to achieve their annual revenue goals. But it isn't the targets that motivate them. It's the sense that if they surpass their mark, they will somehow be transformed. Bonuses, a coveted trip to Palm Springs, cable-ready TVs, and recognition await those who beat their quotas. Although their bodies and spirits break in the pursuit, each, especially protagonist and supersalesman Fred Thomas, believes that this year's success will yield next year's promotion—and an easier life.

A detailed look at life on a Xerox team striving maniacally for something just out of reach



But ease remains continually out of reach, leaving Fred's beleaguered wife, Kathy, to plead: "Physically, you can't take it anymore." Fred replies: "I agree," then adds a hopeless, hanging: "but—." He engages in a punishing quest for the sale that will catapult him into the President's Club, an award for those who exceed quota. To close the final deal as December wanes, he all but romances a bitter client named Nick Callahan. During a lunch at which Callahan finally agrees to buy a copier, Thomas downs five drinks and stays quiet while the malcontent spews his contempt. "You've been screwing me with a smile for 20 years," says Callahan of Xerox.

Is it worth it? Even Thomas isn't sure. "As it was, on the evenings of victories like this one, he simply wondered if this was all life amounted to, this crushing drive to get orders all year, followed by a little trip in the spring as a reward," writes Dorsey. And Thomas isn't the only team member who suffers. Nancy Woodard, assigned to the toughest accounts, is so spent by year's end that she begs to be fired. Diane Burley is too tense to keep her food down. And there's District Manager Frank Pacetta, wiry and intense, who pumps up his people with a mix of wild beer busts, hyperbolic praise, and caustic criticism. The sense that he often doesn't mean what he says only fuels his team's anxieties.

These are finely drawn portraits of suffering, craziness, and triumph. While other writers might have cursed, or worse, pitied these folks, Dorsey doesn't judge. Instead, he locates the dreams that drive the team and finds they're not ephemeral. Thomas and his cohorts live for "the force"—a feeling akin to an experience of divinity for a salesperson. In Dorsey's words: "It was less an emotion than a state of charmed confidence, when it seemed all he had to do was walk into a customer's office and the customer would roll over and say yes."

Beyond that, Thomas clearly wants to make a good life for Kathy and their children. He wants to be a loving hu band—something that his job, whic breeds discontent and competitiveness makes difficult. He believes that if h works hard enough, he'll get promote into a job that's more humane and les demanding. And for him, it happens. B the end of the book he's a national a count manager, less driven by quot and able to spend more time at home.

Underlying Dorsey's narrative is sense that the world is out of whac And not just at Xerox. Almost all th people in the book are so stressed ou pursuing happiness they can't finis thoughts. During a fight, Thomas tel his wife: "You're mentally drained." H next words: "I don't care if I mak trip"—meaning he doesn't care wheth he exceeds his sales goal. The jargo of sales pollutes these people's person relations. Complaining about Kathy poor judgment when it comes to buyin gifts, Thomas demands: "How bad d you want to raise the le el of your game?"

In this book—his first Dorsey has a dauntin tendency to lapse into c chés. "She suspects the may be more to life," says a bit too neatly Kathy. And he declar too often that Fred burned out. But that's quibble. Overall, this is generous book, laced wi amusing touches. There a funny golf outing fe turing deposed Not Dame University footb coach Gerry Faust. B tween Pacetta's ravin ("You're an anim Coach," he bellows aft one good shot), Faust allows he'd turn if the school asked him—which about as likely as General Motors hiring Roger Smith. Elsewhere, Dors describes the bedraggled Callahan somebody "who'd grown beyond any c cern for the semiotics of appearance."

For the book's weight, Dorsey c thank Xerox and its employees. Witho the intimate access that the compa and people like Fred and Kathy Thom gave him, *The Force* wouldn't sing. T irony is that the book could become primer for Xerox customers, layi waste to many popular sales tacti Here's one tip: If a Xerox salesper ever offers you a machine with no pa ments for seven months, make sure y read the fine print.

BY KEVIN KE

Correspondent Kelly reports fr Chicago.

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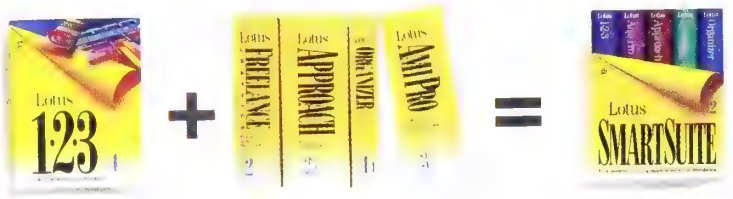

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NOW EASY MONEY WILL TALK AT THE FED

BY PAUL CRAIG ROBERTS

Clinton has appointed two demand-siders to the central bank. So expect rates to get pushed down—and inflation to ratchet up

PAUL CRAIG ROBERTS IS CHAIRMAN OF THE INSTITUTE FOR POLITICAL ECONOMY IN WASHINGTON

President Clinton's choices for two Federal Reserve Board seats could be a signal to expect a revival of inflation. One is a self-described "inflation dove," and both are from the Keynesian school of economics that stresses consumer demand as the driving factor in the economy.

Alan Blinder, a Princeton University academic and erstwhile BUSINESS WEEK columnist currently serving on Clinton's Council of Economic Advisers, and Janet Yellen, a professor at the University of California at Berkeley, are demand-side economists. The key to demand is low interest rates, and the key to low interest rates is for the Federal Reserve to provide banks with plenty of funds to lend.

This is where matters get sticky. The easy-money policy eventually pushes up prices, and once the inflation rate moves up, the Federal Reserve can't keep interest rates down.

To stop the inflation that's pushing up interest rates, the Fed itself has to raise rates. It does this by curtailing the supply of funds that banks have to lend. This is known as "taking away the punch bowl," and the usual result is recession and unemployment.

The key to successful demand-side economic policy is political timing. Recession needs to occur early in the Presidential term so that there is ample time for the economy to recover and produce an expansion that the party in power can ride through the next election. Once the incumbent is safely reelected, the cycle repeats.

BAD TIMING. The problem for Clinton is that the economy, for cyclical reasons, is on an upswing during the first part of his term. This is bad timing. Inflationary pressures could force the Federal Reserve to yank the punch bowl before the 1996 election. Normally when this happens, the President in office gets blamed for the recession and voted out.

As Clinton's appointees to the Federal Reserve, Blinder and Yellen have the job of downplaying inflation and stressing the need for job growth. Their influence will exceed their voting power because their complaints about "excessively tight" monetary policy will resonate with the Democratic Congress, which can threaten the Fed's independence.

The politics of monetary policy are complicated by the fact that the bond market knows this and will put its own interpretation on events. If it looks as though the Federal Reserve is going to be tardy in resisting inflation, bond traders will unload their holdings, thus driving up interest rates. So Blinder and Yellen could succeed in stalling Federal Reserve action to no avail.

Clinton is stuck with the political interest rate cycle because he denigrated President Reagan's supply-side policy and loaded his Administration with demand-side economists. That was a mistake, because supply-side economics doesn't rely on low interest rates. Instead of pouring money into the economy to stimulate demand, supply-side economics pours incentives into the economy to stimulate supply. Reagan relied on lower tax rates instead of lower interest rates to stimulate the economy. This freed him from "stop-go" Fed policy. With lower tax rates encouraging people to produce more income, the Federal Reserve did not need to stimulate the economy by printing money and could focus on bringing down the inflation rate.

LESS GREED? Reagan's supply-side policy allowed him to achieve the record for the longest peacetime economic expansion in our history despite high real interest rates. Eight million new jobs were created while inflation fell. Clinton's demand-side policy is unlikely to duplicate Reagan's success because it relies on low interest rates that cannot be maintained once easy money pushes up inflation. As its history shows, demand-side economics cannot deliver economic growth without inflation. That's why Blinder and Yellen will soon be arguing that a little more inflation won't hurt.

Keynesians don't make good inflation fighters because they blame inflation on nonmonetary factors. In place of too much money chasing too few goods, Keynesians blame greed. Prices are pushed up by greedy oil sheiks, greedy labor unions, greedy businesspeople, and greedy commodity speculators. The same people who deride the 1980s as the Greed Decade attribute the decline in inflation from that decade to less greed on the part of oil sheiks, unions, businesses, and speculators. Apparently, any contradiction is better than giving supply-side policy credit.

Blinder thinks we should just accept inflation as a redistributive device that hurts the rich more than the poor. Reagan, it turns out, protected wage earners by indexing the personal income tax for inflation—but did not do the same for the capital-gains income of the rich. If inflation gets out of hand, Blinder says we can suppress greed with wage and price controls. The Clinton Administration does not connect monetary policy with inflation. In the 248-page 1994 *Economic Report of the President*, which Blinder helped to write, devotes three paragraphs to monetary policy—no less than it gives to the disinflationary effect of lower oil prices.

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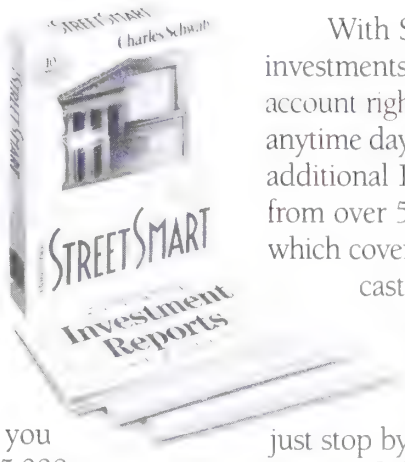

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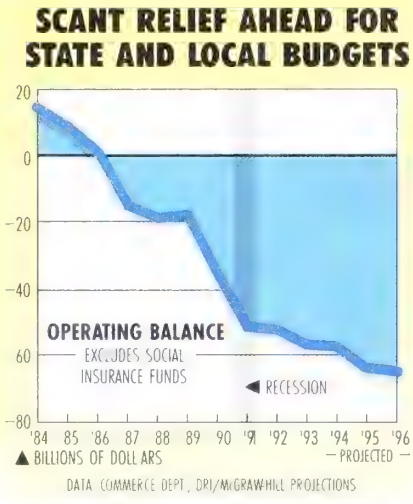
BY GENE KORETZ

STATES MAY BE JUMPING THE GUN BY CUTTING TAXES

It's hardly a dramatic change, but there's no question that the budgetary outlooks of the nation's state and local governments are starting to brighten. In most states and some cities, the strengthening economy is finally producing enough tax revenues to ease fiscal pressures a bit.

Economist Steven D. Gold at the Center for the Study of the States in Albany, N.Y., estimates that state tax revenues nationwide were up a healthy 5.1% in the first quarter over their year-earlier level, and unlike former years, that's without the help of big tax hikes. The upswing has encouraged the governors of at least 19 states to propose tax cuts this year. Four of these states—Arizona, Georgia, New Jersey, and New Mexico—have already enacted such cuts.

SCANT RELIEF AHEAD FOR STATE AND LOCAL BUDGETS



DATA COMMERCE DEPT., DRI/McGRAW-HILL PROJECTIONS

To a large extent, the rash of tax-cut initiatives is a cyclical phenomenon. States typically boost taxes heavily during fiscal emergencies caused by recessions and then, as they did during the 1980s, roll back all or part of the hikes once the economy recovers and tax receipts pick up steam.

What's different in this cycle, however, is the fiscal backdrop. When the economy took off after the 1981-82 recession, the combined balance of all state and local operating budgets (including capital outlays) moved into the black (chart). This time around, the operating balance has remained heavily in the red. And the proposed net reduction in fiscal 1995 taxes would slice only 0.03% from projected state revenues, or a paltry $1.3 billion, compared with tax hikes of $31 billion over the past four years.

Gold says he spies another cyclical influence in the current outbreak of tax-cut fever—the electoral cycle. Some 10 governors advocating tax cuts this year are up for reelection in the fall, he notes, and "tax cuts are a proven vote-getter." He also predicts that the cuts will put even more pressure on hard-pressed localities, whose taxes have been rising even faster than state levies, as state aid to local governments has slowed.

Although some governors, mainly Republicans, are trying to use tax cuts as a lever to force cuts in state and local spending, economist Cynthia M. Latta of DRI/McGraw-Hill doubts that overall outlays can slow or that operating deficits will decline over the next few years. She points to rising Medicaid outlays, growing pressure to strengthen the criminal justice system—last year 40 states were under court order to improve prison conditions—and expanding educational needs.

Elementary and secondary school enrollments, for example, are now rising by 1.5% to 1.7% a year after falling in the early 1980s and growing slightly in the late 1980s. And real outlays per student have jumped by 11% since 1987.

"Eventually, spending will slow," says Latta, "but it won't be tomorrow."

FOREIGN BANKS PULL IN THEIR HORNS IN THE U.S.

It wasn't too long ago that U. S.-based subsidiaries of foreign banks were handily winning market share from their U. S.-owned counterparts—particularly in providing commercial and industrial loans to American businesses. But now, as economist Gary Schlossberg at Wells Fargo Bank notes, the pendulum is swinging in the other direction.

While personal loans and C&I loans on the books of U. S. banks are now rising, ongoing declines at foreign-owned institutions cut their share of total bank lending to a little above 17% at the end of last year from close to 19% a year earlier, the first decline since 1984 and the lowest reading in five years. At the same time, the foreign banks' share of C&I loans, which had jumped from 22.5% in 1985 to 29.4% in 1989 and 35.6% in 1992, fell to under 34%.

Why have foreign-owned banks pulled in their horns? Recessions at home, sour U. S. real estate loans, a decline in syndicated C&I loans, and a tougher regulatory environment all played a part, says Schlossberg. The big question for po tential U. S. borrowers, however, ma be whether the foreign banks will b as willing to lend when credit tighten again as they were during the credi squeeze of the early 1990s.

ARE ECONOMICS MAJORS A DECLINING SPECIES?

Economics may be the dismal science as Thomas Carlyle observed, but a least during the 1980s that didn't dete the interest of college students. Betwee the 1979-80 and 1989-90 academic years the number of bachelor's degrees award ed to economics majors in the U. S. ros from 16,409 to 23,923, and their share all BAs grew from 1.9% to 2.3%.

Now, however, the tide appears t have turned. The number of economic BAs fell 1.8% in 1990-91, and according t a recent survey of 127 colleges and un versities by economists John J. Sie fried of Vanderbilt University in Nash ville and Charles E. Scott of Loyol College in Baltimore, it plummeted b 14.2% in 1992-93.

The sudden decline in economics d grees is a bit of a puzzle, but it shouldn dishearten students majoring in the su ject. Since business values a knowledge economics, their competitive position the job market should improve.

WHY A FALL IN AUTO OUTPUT WON'T WEAKEN THE FED'S WILL

Upcoming reports on industrial c pacity utilization may well sho declines in April and May, but th wouldn't necessarily deter the Feder Reserve from further tightening, ca tions economist Carl Palash of MCM Mo ey Watch, a financial-markets advisor firm. He calculates that declines in m tor-vehicle output in the second qua ter should shave at least half a percen age point from the industrial operati rate, which registered 83.6% in March

The catch, says Palash, is that t Fed knows this. It also knows that t production decline is mainly due to Ge eral Motors Corp.'s decision to imp ment some model changeovers early, a to capacity constraints on the output hot-selling light trucks. So even if overl capacity use falls, he says, "the Fed wi still be inclined to raise interest rates operating rates in other industries b sides motor vehicles continue to climb

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16, 1994

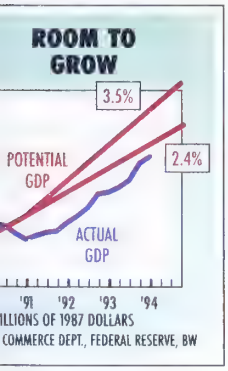
BY JAMES C. COOPER AND KATHLEEN MADIGAN

WHAT WILL IT TAKE TO PLEASE THE BOND MARKET?

All together now, repeat the bond market's new mantra: Weak is strong, down is up, and slow is fast. Got it? O. K. Now you're ready to be a trad- n this market.

ou would have done especially well on Apr. 28, when Commerce Dept. reported on first-quarter economic wth. The pace of real gross domestic product slowed rply from a robust 7% in the fourth quarter of 1993 to wer-than-expected 2.6%. Any coldly objective reading he report showed modest, noninflationary growth. unds for a rally, right? Wrong. The bond market ached into a furious sell-off. Recent massive interven- to support the dollar has only heightened market sion (page 34).

he fact is, real GDP remains far from any reasonable sure of what the economy is capable of producing— is, if all of its labor and output capacity were fully loyed (chart). Inflationary pressures do not even begin uild until the economy reaches this potential level of . The Federal Reserve pegs the economy's potential wth at 2.4%. But because of improving productivity, level could well be in the range of 3%-3.5% (page 62).



The bond mavens ignore such arguments, of course, focusing instead on the acceleration in the first-quarter GDP price index to 2.9% from 2.3% in the fourth quarter. Never mind that the speedup reflected a onetime federal pay raise and a quirk in the way import prices enter the index. The price index for gross domestic purchases, which sidesteps that quirk, rose only 2.3% oth the fourth and first quarters.

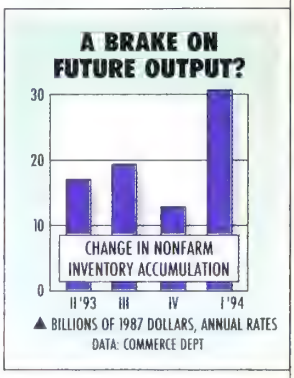
ond folk also said that first-quarter growth was bluntby bad weather, the Los Angeles earthquake, and unainably large declines in government expenditures net exports. As a result, they said, real GDP growth ld rebound strongly in the second quarter, perhaps to or 5%.

NLY A MALL PRING OUNCE

Right now, however, about 3% looks more reasonable—and that is not enough to fuel inflation. While the Federal Reserve's latest regional survey of business activity ough Apr. 25 showed generally "solid economic growth," lso noted that price pressures remained "restrained."

It's true, weather and the quake were negatives, but as a percent of GDP, the impact was small. Also, postquake rebuilding will be stretched out over a long time, and much of the weather-related losses in retail sales and industrial production will not be made up.

Government outlays did drop a steep $14.9 billion last quarter, mainly reflecting an $11 billion decline in federal spending. But most of that fall occurred in defense, which is still in a long-term shrinkage and unlikely to bounce back this quarter. A $3.9 billion falloff in state and local outlays does appear questionable, though, since the bad weather forced unusually large outlays for snow removal and highway cleanup.



Likewise, some improvement in net exports seems plausible. A widening in the deficit between imports and exports, by itself, subtracted $19.7 billion from first-quarter growth, more than 1½ percentage points of growth. However, any second-quarter bounce may be small. Although exports, which plunged last quarter, should start growing again, imports grew at a far lower rate than they had during the previous year. Faster growth there will offset the export rebound.

WHERE GDP GROWTH WILL SLOW DOWN

More important, though, the bond market ignored two key GDP components that are likely to contribute much less to second-quarter growth than they did last quarter: consumer spending and business inventories.

Nonfarm inventories grew by $30.7 billion in the first quarter, the largest accumulation in six years (chart). Some of that pileup was probably unintended, because of weather-depressed sales, and it will have to be worked off. Already, manufacturers reported a 0.1% dip in their March inventories, even as new orders rose 1.1%.

Also, surging auto production accounted for much of the overall rise in stock levels, and auto output in the second quarter is already scheduled to be well below the first-quarter level. The coming slowdown in inventory building could subtract as much as a percentage point from second-quarter GDP growth.

The surprising buildup in nonfarm inventories suggests that industrial output, which soared at a 7.7% clip last quarter, will begin to slow. The April report from the

ER C HOFFMAN/BW

Business Outlook

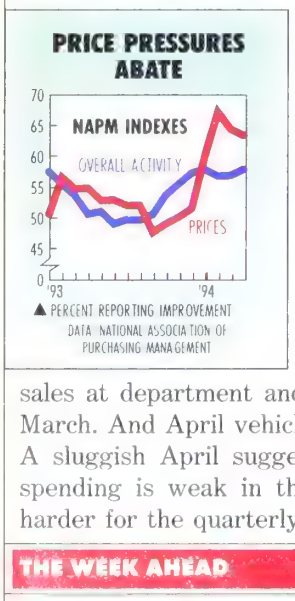
National Association of Purchasing Management shows that production will downshift this spring, but not stall out, while inflation continues to exist more in the minds of bond traders than in the reality of industrial-price lists.

The NAPM's index of industrial activity rose to 57.7%, from 56.7% in March. The production index slowed a bit, but employment rose to a five-year peak. The NAPM said new orders remained at their high levels of February and March, with export demand rising. Plus, the index of order backlogs jumped five points, to 61.5%, in April.

In addition, the NAPM price index, which set off the bond bears when it rose sharply in February, has now fallen for two consecutive months (chart).

CONSUMER SPENDING CRUISES ALONG

Crucial to any discussion of future U. S. economic growth is the outlook for consumer spending, since it accounts for two-thirds of GDP. Real personal outlays grew at an annual rate of 3.8% after a 4.4% shopping spree in the second half of 1993. Will shoppers keep spending at nearly a 4% pace in this quarter?



Probably not, especially since April spending may have been crimped by two unrelated events: taxes, which meant households had a little less cash to spend, and an earlier-than-usual Easter that pushed some retail buying into March.

A slowdown in spending last month is already evident in the preliminary data from retailers. The *Johnson Redbook Report* says sales at department and chain stores slipped 0.2% from March. And April vehicle sales were also below March's. A sluggish April suggests a slower second quarter: If spending is weak in the first month of a quarter, it's harder for the quarterly average to post a big increase.

However, the upward trend in disposable income suggests that spending should recover quickly in May and beyond. Real aftertax earnings grew at an annual rate of 2.7% in the first quarter, but the gain would have been higher except for the income lost due to the earthquake and the harsh winter. Incomes should grow above 3% this quarter, setting the pace for a 3% gain in household spending as well.

Stronger consumer fundamentals also helped to lift the government's index of leading indicators by 0.7% in March. Three of the four biggest contributors to the hike were consumer-related: a longer workweek, more homebuilding permits, and fewer jobless claims. The rise in the index confirms the economy's steady upward course (chart).

The spring quarter may also see one last rush of home buying. Construction was battered by last winter's weather: The GDP data showed that nonresidential construction fell at a 16.1% pace and the rise in residential building slowed to 9% from a torrid 31.7% advance in the fourth quarter.

Some bounceback seems assured this spring. Construction spending, reported monthly, already shows a 0.8% rebound in March, after building outlays dropped 2.3% in January and 1% in February. Moreover, new single-family home sales increased 11.1% in March, to an annual rate of 739,000, as buyers moved to lock in still-low mortgage rates. The drag from higher mortgage rates is likely to show up in the third quarter.

Of course, that's exactly what the bond market is aiming for: slower economic growth. But as the first quarter shows, the market doesn't seem happy even when it gets what it wants. So if you want to score in this market, just keep repeating: Weak is strong, down is up, slow is fast.

THE WEEK AHEAD

PRODUCER PRICE INDEX

Thursday, May 12, 8:30 a.m.

Producer prices of finished goods likely edged up just 0.1% in April. Prices rose 0.2% in March, but falling food and energy costs in April offset gains elsewhere. Excluding food and energy, prices probably increased 0.2% in April, the same as in March.

RETAIL SALES

Thursday, May 12, 8:30 a.m.

Retail sales likely increased by 0.5% in April after a 0.4% advance in March, according to the median forecast of economists surveyed by MMS International, a division of McGraw-Hill Inc. Excluding cars, April sales are also expected to have risen by 0.5% after a 0.4% gain in March. However, a 0.2% drop in sales at department and discount stores, as reported by the *Johnson Redbook Report*, suggests that the April forecast may be too optimistic.

CONSUMER PRICE INDEX

Friday, May 13, 8:30 a.m.

Everyone will be watching on Friday the 13th to see if the CPI report once again spooks the bond market. The MMS median forecast is that consumer prices rose 0.3% in April, the same increase as in March. Excluding food and energy, the core rate of inflation probably increased 0.3% last month as well, the same as in March. However, the forecast range is quite narrow, with all the economists projecting a rise between 0.2% and 0.4% for the total CPI and the core rate. So far in 1994, inflation is rising at an 2.5% annual pace.

BUSINESS INVENTORIES

Friday, May 13, 10 a.m.

Inventories held by manufacturers, wholesalers, and retailers likely increased just 0.2% in March. Inventories built up in February as stock levels rose 0.5%. Factories, however, have already reported that their inventories fell 0.1% in March. Business sales probably rose 0.6% in March, after jumping 1.2% in February.

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PHARMACEUTICALS

MAY 16, 19

DRUG-MERGER MANIA

A RASH OF NEW ALLIANCES RESHAPES THE INDUSTR

Feel the tremors? That's the $200 billion drug industry, in seismic upheaval. Consolidation is reshaping the landscape, as giant multinational producers search for new products and wider distribution. Within a few years, the way pharmaceuticals are invented, made, and sold will bear little resemblance to the methods of a decade ago.

In the space of two days, the drug business provided a powerful glimpse of its future. On May 2, Roche Holding Ltd. agreed to buy troubled drugmaker Syntex Corp. for an astounding $5.3 billion. A day later, suitors began swarming around Eastman Kodak Co.'s Sterling Winthrop unit, now on the block. And SmithKline Beecham PLC unveiled its pact to buy a big distributor, Diversified Pharmaceutical Services Inc. for $2.3 billion, and to ally with Diversified's parent, powerhouse health maintenance organization United HealthCare Corp. Likewise, Pfizer Inc. agreed to a venture with Value Health Inc., operator of the ValueRx drug middleman.

Individually, the deals came as little surprise. Syntex has struggled in recent years, and Sterling, too, has been a weak sister to photography since Kodak acquired it in 1988 (page 32). Diversified's purchase had been almost inevitable since Merck & Co.'s $6.6 billion acquisition last year of rival distributor Medco Containment Services Inc. and a marketing "alliance" formed in April by three other drugmakers and distributor Caremark International Inc.

"BLOWN AWAY." Taken together, though, the moves reflect a fundamental struggle for financial control in the health-care business. In just a few years, the balance of power has shifted dramatically: Hospitals have won clout by merging or forming purchasing alliances; they and other big drug buyers have contracted with benefit-management companies to negotiate lower prices on their behalf. "Never before have we been confronted with the range of challenges we face today," says Sheldon G. Gilgore, chief executive of G. D. Searle & Co.

Now, amid plunging profits, comes the drugmakers' response. A highly fragmented industry—its largest player, Merck, controls about 5% of the worldwide market—is bulking up. To combat soft prices, the big producers are scrambling to build market share by selling more products. To fight the growing might of distributors, they're buying the distributors.

DATA: BRIDGE INFORMATION SYSTEMS INC

In the rush to buy new muscle, there will be mistakes. Industry analysts and executives were shocked by Roche's mighty bid for Syntex, a company with little apparent promise in its development pipeline and a core product, the anti-inflammatory naproxen, that virtually collapsed after losing patent protection last December. "I was blown awa the price," says one senior Syntex ma er. Likewise, some analysts questio the heady 50 times earnings SmithK will pay for Diversified.

But for buyers with deep pock such deals represent opportunity. Ro which bought 60% of biotech leader

itech Inc. four years ago, insists that ntex' research and development ca- bility is sound. "Syntex is a research- ented company with excellent sci- e," says Fritz Gerber, Roche's irman and CEO. Moreover, the acqui- on will give Roche a broader product to sell big customers in the U.S. ere's a wild card, too: Syntex, with unusual Panamanian charter, may vide a valuable tax shelter.

Likewise, Sterling is for sale because it n't fit Kodak's business aims. But nce's Elf Sanofi, which has the right first refusal to bid on the $1 billion rling prescription business, says it is nly interested.

rmany's Bayer, which has long wanted win back its aspirin trademark in the S., is seeking Sterling's $900 million S. over-the-counter business.

Such consolidation among producers l continue: Big manufacturers, too, investing heavily in small biotechnol- outfits with promising products. But the more compelling strategy is represented by SmithKline's deal: Buy the distribution channel. By snapping up Medco and Diversified, Merck and SmithKline essentially swallow up the middlemen that have forced their margins down.

GENTLE REMINDERS. Executives at SmithKline, like those at Merck, insist that Diversified will continue to carry rivals' drugs on their recommended lists—but admit that they hope to lift sales of their own products, too. Says J. P. Garnier, pharmaceuticals chairman at SmithKline: "We will have preferred positions... that will expand our market share in certain categories."

Millions of consumers will be affected by that strategy. Diversified manages pharmacy benefits for 11 million people, a big chunk of the 50 million Americans so covered. Drugmakers see in that number an enormous opportunity to capture new sales. Now, SmithKline, through Diversified, will have the power to enforce compliance with drug-treatment programs, for example—by sending patients with high blood pressure, say, reminder letters to keep buying their medicine. SmithKline also will get data on the typical pattern of diseases that will help it sell and price their products better.

Eventually, pharmaceutical companies could move far beyond simple drug production and sales into health-care delivery. With its Diversified purchase, SmithKline inked a six-year deal with 1.6 million-member United HealthCare that will give the drugmaker data it can use to compare treatments and their cost-effectiveness. Such "outcomes" analysis could be potent for marketing drugs. Moreover, the HMO can help the drugmaker develop so-called capitation programs, allowing Diversified to cover a particular company's workforce for flat per-employee fees.

Customers who have enjoyed their growing purchasing power aren't thrilled by the prospect of this brave new world. Pharmacy-benefit managers have won low prices for the Group Insurance Commission of Massachusetts, which provides drug benefits for 240,000 state employees, retirees, and their dependents. Now, Executive Director Dolores L. Mitchell is insisting that Medco provide periodic reports to prove she's still getting the best deals, not just Merck products. "We all have to be a little shrewder as purchasers," she says.

FIRST LOYALTY. Others worry about the effect on quality of care. Patricia Wilson, a consultant on pharmacy benefits at Associates & Wilson in Rosemont, Pa., frets that the push for cost-effectiveness could compromise patients by favoring inappropriate drugs that happen to be on a distributor's sales list. Employers, she adds, must realize that the first loyalty of benefits managers owned by drugmakers now will likely be to their corporate parents, not to the customers. "Who is the client?" Wilson asks.

The confusion seems sure to continue. Already, rumors abound that West Coast distributor McKesson Corp., which has a pharmacy-benefit unit, is hot on the prospect list of such drugmakers as Glaxo Holdings PLC, though neither company would comment. Producers such as Upjohn Co. and Marion Merrell Dow Inc. have long been viewed as takeover candidates. Even Merck discussed mergers with the likes of Pfizer and Glaxo several years ago, and some observers say a combination with another drugmaker is again a possibility. Everyone seems to agree: In drugs, big has suddenly become much better.

By Joseph Weber in Philadelphia, with Joan O'C. Hamilton in San Francisco, Gail Edmondson in Paris, Paula Dwyer in London, and bureau reports

THE NEW FLASH AT KODAK

Say one thing for George M. C. Fisher: He doesn't shy away from big decisions. A scant five months after taking over as Eastman Kodak Co.'s CEO, Fisher stunned outsiders on May 3 by announcing that Kodak would auction off three big units, including the Sterling Drug Inc. operations bought in 1988 for $5.1 billion. In a single stroke, Fisher repudiated the failed diversification strategy of his predecessors, shored up a debt-laden balance sheet, and underscored his commitment to Kodak's imaging business.

So far, Fisher appears to be winning plaudits from nearly everyone. "The pace at which he has been moving is refreshing," says a big institutional holder. In part, the kudos have come because of what Fisher has not done. He has not acted like a corporate Attila the Hun, swinging the budgetary ax and further demoralizing Kodak's already dispirited troops. Nor has he spent six months or more studying the company before taking decisive action.

NOT NOVEL. Fisher's turnaround strategy is fairly simple: Concentrate on wringing improved earnings from Kodak's core photography business. And build a future with digital technologies such as all-electronic cameras, thermal printers, and image-storage devices such as photo CDs. Any peripheral businesses, such as pharmaceuticals, should be sold.

Fisher readily admits the strategy isn't novel: "The difficulty is not knowing what to do, it's doing it." But insiders say Fisher has finally begun to tackle some long-running internal problems. One example: He has started to disentangle Kodak's management structure, which deflected responsibility for past mistakes. And he has ended an internal debate by forming a new digital-imaging group—resolving what many observers had seen as a half-hearted effort by traditional photography execs to push the new technology.

Another key target has been morale, left shattered by years of ineffectual restructurings and uncertainty. Fisher has frequented the company cafeteria and sent hand-written notes to congratulate staffers for solid work. Just as important, he has stressed that Kodak has a bright future with no immediate need for more layoffs. "Morale is better than it has been for years," says one insider. "People see George as a savior." Customers are similarly upbeat. "He's very interested and is willing to learn and understand our business," says David M. Ritz, head of the 485-unit Ritz Camera Centers Inc. chain. "That wasn't necessarily true of his predecessors."

Fisher's breezy style also is bringing a breath of fresh air into Kodak's stiflingly hierarchical management culture. Edgar J. Greco, who heads Kodak's $2.5 billion office-imaging division, says he met privately only once a year with Kodak's two prior CEOs. Fisher often asks him to drop by. And when a problem crops up, Greco says, "George owns [it] with you. He doesn't say 'You have a problem, and you'd better fix it or we'll find somebody who can.'"

But warm and fuzzy goes only so far. Fisher and new CFO Harry L. Kavetas, the former CEO of IBM Credit Corp., vow to get tough on managers, who in the past were rarely held accountable for mistakes. The problem: Executives weren't given strict budget targets, and there was often no monthly review of a division's progress. "You're going to see us become much more religious about holding people's feet to the fire," says Fisher. "If they don't perform, we'll take them out."

OUTSIDER. To squeeze Kodak's bloated cost structure, Fisher announced 10 teams to examine such issues as research-and-development productivity and cycle-time improvement. He pledges that return on net assets will at least double by 1999, from about 6% last year. He and Kavetas already have identified several cost-saving measures, including eliminating $100 million of expenses on unneeded real estate.

Some observers are surprised that Fisher has brought in only one outsider—Kavetas—given the need to shake up Kodak. "To do what he wants may require significant personnel changes, including at the highest levels," says Michael W. Ellmann, an analyst at Wertheim Schroder & Co. Fisher says he will recruit more outsiders and has identified his choice to head digital imaging.

There are still lots of skeptics who like what Fisher is saying but wonder if he can deliver. Says Fisher: "The skepticism is understandable given the track record of the company." But after just a few months, Fisher is starting to establish a track record of his own.

By Mark Maremont in New York

GEORGE FISHER'S CHECKLIST

FISHER: FOCUSING ON THE PHOTO BUSINESS

DONE

- [x] Shore up employee morale by emphasizing bright future
- [x] Plot new strategy based on analysis of Kodak's situation
- [x] Put Sterling drug operation on the block
- [x] Hire new CFO: Harry Kavetas, formerly CEO of IBM Credit
- [x] Start disentangling the Byzantine management structure
- [x] Emphasize digital imaging by forming a separate digital unit
- [x] Introduce low-price Funtime film

TO DO

- [ ] Focus on specific digital technologies where Kodak is on top
- [ ] Sign deals with partners to improve technology, market reach
- [ ] Hire outsiders for key positions
- [ ] Change risk-averse, noncon-frontational culture
- [ ] Cut costs to world-class levels; instill customer focus
- [ ] Figure out how to milk more profits from film biz

WORKER MORALE WORSENS AT CATERPILLAR

- UAW members are working under a two-year-old labor contract that was imposed by Caterpillar after a strike that lasted more than five months. Labor and management have made little progress on a new agreement.
- Employees complain of harassment by supervisors and frequent overtime at the company's plants. Charges the company denies. However, the National Labor Relations Board has filed 82 complaints against Caterpillar.
- Workers are unhappy that Caterpillar refuses to grant them the same job-security pledges that the union won at Deere.

AT IS PURRING, BUT HEY'RE HISSING ON THE FLOOR

e UAW is unhappy—and a strike could stymie the company's growth

hese are the glory days for Caterpillar Inc. After recession-plagued years in 1991 and 1992, U.S. demd for its giant earth-moving equipt is soaring, and Europe may soon ound, too. A $1.8 billion modernizaprogram has the company churnout excavators and bulldozers faster n ever, while a reorganization has down costs. The result: Cat's earns should climb 16% this year, to $760 ion, as sales rise 7%, to $12 billion, dicts Smith Barney Shearson Inc. ant Tobias M. Levkovich. He and other l Street analysts are bullish on the k, which they predict could hit 150 t year, vs. 112 today.

There's just one note of discord in all success: Cat's continued headting with the United Auto Workers. April, 1992, the company squashed a -month walkout by threatening to manently replace 15,000 strikers. rkers gave up and went back without ew contract. Despite threats of a nt-floor slowdown by UAW leaders in roit, Cat's productivity improved.

GH TALK. Now, though, a grassroots ellion may be building. With Cat's orbook so full that some products are ng rationed to dealers, UAW leaders contemplating another walkout. Lar Solomon, president of UAW Local 217 Decatur, Ill., warns that a shutdown possible in the very near future." That could be just bold talk by union ders hoping to recover from the embarrassment of their '92 failure. But it's clear that the rank and file is unhappy. Indeed, workers have staged five spontaneous walkouts since last fall. They shut down the entire company for three days last November, after managers suspended a union official. And on Apr. 26, two of Cat's largest Illinois facilities suffered a one-day strike.

Caterpillar executives blame peer pressure and argue that overall labor relations are good. "Our expectation is that we will continue to serve our customers," says Glen Barton, one of Cat's two group presidents. But others expect trouble. "There's a growing sense that we have a major problem," says one big Cat dealer.

To workers, the problem boils down to job security. Two years ago, when Chief Executive Donald V. Fites refused to grant the same job-security pledges the UAW won from Deere & Co., he argued that he had to hold down costs to compete with tough rivals, such as Japan's Komatsu Ltd.—whose products didn't compete directly with Deere's. When the strike failed, Fites imposed a contract on the UAW and said efficiency measures could eliminate up to 1,500 strikers' jobs.

Cat has fared better than Fites predicted, however. Komatsu has been hammered badly by the strong yen and poorly performing joint ventures in North America and Europe. It led the industry with price hikes of up to 9% last year that cut into its market share. Indeed, Komatsu has lost ground in most product categories, while Cat posted gains of up to 10 percentage points, says industry consultant Frank Manfredi. Cat has done so well that it has rehired all the strikers—and added 1,300 new workers.

Nonetheless, Cat has continued to wage war on the shop floor. For instance, after strikers returned, Cat tried to keep them from wearing T-shirts that urge: "Permanently Replace Fites." It suspended employees who persisted and even fired some. One Aurora-based worker, Janet Kolzow, a 48-year-old grandmother with 27 years at Cat, was dismissed in 1993 for wearing a button that said "Stop Scabs," referring to workers who cross picket lines. The National Labor Relations Board has issued 82 complaints against Cat for such actions. "It's an awful place to work," says one Peoria-based employee.

MIDNIGHT CALL. For that reason, the UAW is quickly winning back workers' loyalty. After the strike's collapse, many members blamed UAW headquarters for leading them into a morass. But the recent walkouts erupted from below. The Apr. 26 strike started when managers told a Decatur shop steward that he could no longer write up employee grievances. Angry workers called the local's president out of bed to open the union hall for a meeting. Today, more than 90% of UAW members are voluntarily ponying up union dues.

UAW leaders may wait to mount a full-scale walkout. Most Cat workers still remember the fear of being replaced. And there's no sense in starting a war if a few skirmishes will get contract talks going. Still, strong demand, a lean front office, and new factories are of little use if nobody is building machines.

By Kevin Kelly in Aurora, Ill.

CURRENCY

AS THE DOLLAR NEARS "PENNY PARITY," 100 YEN TO THE BUCK, SOME FEAR THAT THE GREENBACK COULD FALL QUICKLY TO 90 OR EVEN LOWER

THE DOLLAR'S SLIDE MAY HAVE A WAY TO GO

Massive intervention by central banks could fail to stop the decline

If you want to get a rise out of Ruud P. Roggekamp, manager of foreign exchange and derivatives at Chicago's FMC Corp., mention the plummeting greenback. "It's stupid that the dollar is weakening," fumes Roggekamp. "I can see no fundamental reason for it."

Indeed, the U. S. economy is growing nicely, especially compared with the fledgling recoveries under way in Japan and Germany. And U. S. interest rates are rising. Add it all up, say American executives, Clinton Administration policymakers, and economists, and you should get a strengthening dollar.

Try telling that to foreign exchange traders around the world. Since mid-April, they have pushed the dollar down 5% against the German mark. On May 3, they drove it perilously close to "penny parity" with the Japanese yen—a record-low 100 to the buck (charts). The plunge forced the Federal Reserve and other central banks to buy billions of dollars on the open market a day later, the second round of official intervention in only a week.

In fact, after talking the dollar down last year, and then doing little in subsequent months to change the impression that it wanted the currency to weaken to help curb Japan's trade surplus, the Clinton Administration has had a foxhole conversion. Washington now seems possessed by a fear that a run on the greenback would trigger the third global bond-market meltdown in as many months. That would push U. S. long-term interest rates higher and could wreak havoc in Japan and Germany. "This Administration sees no advantage in an undervalued currency" Treasury Secretary Lloyd M. Bentsen said in a statement. Adds another senior Administration official: "Enough is enough."

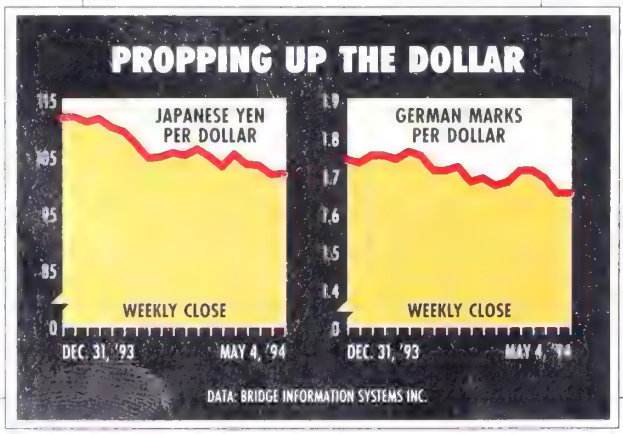
But many dollar bears are not yet willing to concede that point. And even some Fed insiders, critical of the Administration's earlier unwillingness to stabilize the dollar, think that trying to prop it up now will prove futile.

The dollar bears remain worried about the Fed's apparent reluctance to risk slower growth by staving off future inflationary pressures with more aggressive interest-rate hikes. They are unimpressed by the inflation-fighting credentials of Council of Economic Advisers member Alan S. Blinder and University of California at Berkeley labor economist Janet L. Yellen, the President's nominees for the Federal Reserve Board. And they are disturbed about the possible inflationary impact of President Clinton's aggressive trade policies toward Asia. To the bears, nothing short of more Fed rate hikes can save the dollar from a scary new dive.

And many traders think the Fed will respond by continuing the round of tightenings it began in February. "They may have to move quickly," says former Fed Governor Wayne Angell, now chief economist at Bear, Stearns & Co. That could mean raising the discount rate, which has been stuck at 3% since July, 1992, by a half a percentage point. While that might rattle the bond market, the impact would be nothing compared to the effects of a free-falling dollar. Noting how the plunging greenback was pummeling bond prices just before each of the Fed's recent interventions, Bernard G. Schaeffer, president of the Cincinnati-based Investment Research Institute Inc., estimates that bearish sentiment among fixed-income traders "is cataclysmic. We don't need another downward cascade."

RECORD LOWS. As May 4 dawned, however, that seemed likely. With Japan's markets closed for the long Golden Week holidays, the dollar had skidded to 100.90 yen in New York the afternoon before, and headed even lower overnight in Europe. So, as U. S. markets opened, the Fed and its allies struck. But with Japan facing political gridlock and mounting trade tensions over its $130 billion current-account surplus, the greenback's value could still slide an additional 10%, some bears say. "Once we break 100 yen, the dollar could fall very quickly to 90," says Miron Mushkat, Hong Kong-based chief economist for Lehman Brothers Asia Ltd.

Who would benefit from a continued slide in the greenback? Try Hong Kong, Thailand, and other low-wage Southeast Asian exporters. With their currencies closely following the dollar, they could see a big investment boom from Japanese manufacturers fleeing the high yen. That could cost thousands of Japanese workers their jobs, warns Sony President Norio Ohga. He wants to see Washington and Tokyo push the buck back to 120 yen. But Ohga likely will be disappointed



le talks between Tokyo and Washing- have broken down. And new Prime ister Tsutomu Hata seems unable to eve political reforms. No wonder ers are piling into the yen.

erman investors are shunning the ar, too. Economist George Magnus . G. Warburg Group figures that the ar could slip 7% from its current lev- o around 1.52 marks, by summer.

Vhy? Germany, says Prudential Se- ties economist C. Michael Aho, "could be picking up faster than most people expect." Indeed, improving factory orders, production, and profits could keep the Bundesbank from cutting rates much further. Thomas Mayer, chief economist at Goldman, Sachs & Co. in Frankfurt, expects to see the Bundesbank cutting rates by a quarter of a point by this June. But by the end of 1995, three-month German interest rates, now at 5.3%, could be back up to 5.6%. "The Bundesbank," he says, "has probably come to an end of monetary easing."

Such forecasts can't help but bolster the cause of the dollar bears. "We really do believe the dollar is fundamentally undervalued," says Colgate-Palmolive Treasurer Brian J. Heidtke. That is also the line that the Clinton Administration is pushing. Whether traders buy it is anybody's guess.

By William Glasgall and Suzanne Woolley in New York, with Bill Javetski in Paris, and bureau reports

Commentary/by Paul Magnusson

DEAR ELIZABETH: THE DOG ATE YOUR SOCIAL SECURITY

n Apr. 28, President Clinton was asked if Social Security was going ke. He said no. To prove it, promised to write to "everydy in the country every year their Social Security account: ere's what's in it. Here's how ch money it's earned. Here's at you can look forward to tting out.'" Clinton pledged a ter "within the next four or e years," safely past the 1996 ction. No fool, he. Still, telling e truth about Social Security uld be unprecedented for polians. Could it be done? I decid- to try it myself, in a letter my 7-year-old daughter:

ar Elizabeth,

Pay attention, Sweetheart, beuse this gets complicated. Even e President gets it wrong. I'm ry sorry, but there's no money your Social Security account d never will be. That's because one has her own Social Securaccount. Instead, people send % of their pay to Washington, eir bosses match it, and it's ent right away paying Social curity and medical benefits to der folks. And what's left over is ent on other important things, such aircraft carriers, national parks, and reign travel for members of Congress. Meanwhile, the Treasury Dept., which ys all the government's bills, replaces e money it borrows with IOUs. Of urse, the Treasury Dept. has to pay terest. So it just sends more IOUs to e Trust Fund. That's how the Trust nd is really "invested"—in IOUs, to paid by future taxpayers. That's you! All this will change in 2013, when you rn 26. That's when the first wave of by Boomers—including me—starts reing. Since there are so many of us, ere won't be enough money coming in from payroll taxes to pay for our retirement. So you'll have to start paying back the IOUs through your regular income tax. Then you'll pay for my retirement through your regular Social Security payroll tax. Whew! Your tax rates will have to be pretty high! I hope you'll feel my generation spent your money wisely.

Love, Dad

Elizabeth's vision of Dad's retirement. The links will be alive with boomers

Actually, according to the latest annual report of the Social Security Trustees, the reality is even worse. Both the Disability and Medicare funds run by the system will go bust in 1995 and 2001, respectively, unless they're bailed out. The report's rosy outlook assumes the economy will grow every year without a downturn through 2070. And unemployment will stay around 6%. Inflation? Never higher than 4%.

But the report admits financing could get a lot tougher if the economy slips into recession. If such downturns were to occur in 1995 and 1998, the Trust Fund will run into a cash-flow problem in '98. Income taxes will have to be raised or other programs cut to pay retirees. And payroll taxes eventually would have to double. Of course, the government could try to borrow the difference and shift the burden onto the next generation.

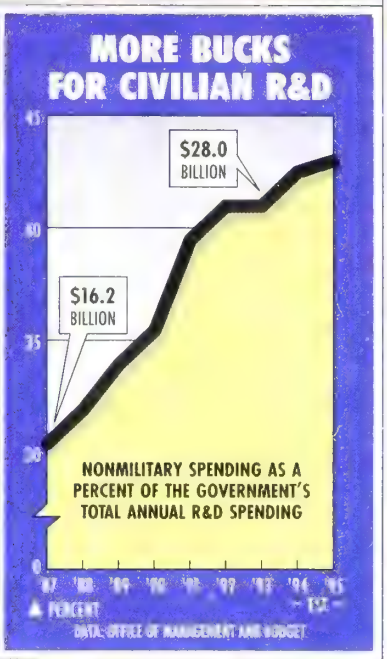
GET REAL. Such solutions, however, aren't very popular on Capitol Hill just now. Recently, House Ways & Means Chairman Dan Rostenkowski (D-Ill.) proposed a benefit cut plus a tax hike to fix things. But higher taxes make up most of the package; the mild benefit cuts are phased in over 50 years. Senate Finance Committee Chairman Daniel P. Moynihan (D-N.Y.) favors removing the Social Security Administration from the Health & Human Services Dept. Hardly a solution.

Unfortunately, politicians lack the courage to propose curbing benefits for affluent retirees and raising the retirement age—the only realistic solutions. But Boomers beware: Elizabeth and her pals one day will discover the truth about Social Security. And they won't like paying double taxes to fund their parents' greens fees. So, Clinton's letter ultimately could force the most radical change of all—a complete overhaul of the system.

Magnusson covers economic policy from Washington.

ELIZABETH MAGNUSSON

TECHNOLOGY



WHY WASHINGTON IS ANOINTING FLAT PANELS

The Pentagon wants the technology. The Clintonites want to test policy

For the Clinton Administration's biggest foray yet into industrial policy, it started remarkably casually. In February, 1993, Laura D'Andrea Tyson, chair of the White House Council of Economic Advisers, voiced the opinion in a meeting with National Economic Council Chief Robert E. Rubin that under the right conditions, Washington might want to intervene to help a specific industry. One example, she suggested, might be flat-panel displays, a Japanese-dominated technology that's a vital component in everything from laptop computers and video games to control-panel displays in jetliners.

The idea percolated in Rubin's mind for several weeks. Then, after a briefing with electronics executives, he reminded an aide of the suggestion. "You know that flat-panel idea?" Rubin asked. "Laura wants to use it as a case study." So a memo was drafted to Pentagon acquisition chief John Deutch, asking for a major study of government support for flat screens. That directive bore fruit on Apr. 28, when the Defense Dept. announced a bold plan to spend $587 million over the next five years—and up to $1 billion overall—to jump-start a commercial U. S. industry.

The tale of how Uncle Sam came to anoint flat panels as a chosen industry offers an unusual window on industrial policy, Clinton style. The basic thrust: Pick only those areas where the private sector is falling short of a critical national goal—in this case, defense needs. Then fund research, but only in technologies picked by industry. And finally, decide whether the national need is so great that government must provide incentives to manufacturers. That approach, Clinton Administration officials argue, will avoid costly industrial-policy failures, such as the estimated $2 billion poured into the doomed synthetic-fuels effort from 1970 to 1984.

Pentagon strategists began by addressing a narrow issue: How could it get the screens it needed? Some $200 million in funding from the Defense Dept.'s Advanced Research Projects Agency (ARPA) from 1989 to 1993 had helped companies—including Texas Instruments Inc., Xerox Corp., and others—develop a dazzling array of innovative flat-screen technologies.

> Why not offer R&D subsidies? "We thought, 'God, this could be the magic bullet' "

The rub: None of the technology "will be showing up in Defense's procurement pipeline," says Kenneth S. Flamm, the Pentagon's dual-use technology maven. In the face of Japanese lead, companies did not want to risk the huge sums needed to build manufacturing capacity.

Flamm was determined to fix this problem. A former Brookings Institution economist who was brought in, in part, to study the flat-panel situation for Tyson and Rubin, Flamm badgered everyone for data—on the size of flat-panel markets, the cost of building plants, and the extent of defense needs. There were some big surprises. One was how rapidly the market is growing: Analysts figure it could hit $20 billion by the year 2000. Another shock was how small the defense demand would be. "There's no way that Defense will amount to more than a 5% share of this exploding marketplace," says Flamm.

SEED MONEY. The findings suggested that the traditional Pentagon tack of paying for military-use-only plants would be futile. Far better for Uncle Sam to spend seed money to create a strong commercial industry, Flamm argued. But how could the federal government entice U. S. companies to shell out up to $400 million to build full-scale factories?

The answer came during a marathon late-December meeting of Flamm's 10-member interagency team in a rented room at the Institute for Defense Analyses in Alexandria, Va. Why not offer matching research-and-development subsidies—up to $120 million—to companies that committed their own money for a manufacturing facility? That way, the U. S. government would not infringe on global trade rules that bar manufacturing subsidies. "We thought, 'God, this could be the magic bullet,' " recalls Flamm.

From there, Flamm had to sell the plan to higher-ups. It helped that industry was beginning to present a united front. Flat-panel makers—such as Planar Systems, OIS Optical Imaging Systems

Photonics Technology—had been at erheads with the computer industry a 1991 dumping suit the panel mak- had brought against Japan. Duties on e-in-Japan parts threatened to raise computer makers' costs.

breakthrough occurred when OIS ded to side with computer makers withdraw its complaint. By early year, some computer companies had joined the ARPA-funded U. S. Dis- Consortium (USDC), a group of flat- el makers and suppliers. "If they e still at each other's throats," says a te House official, "the Administra- would not have gone forward."

ANT STEP." The crucial question now: companies ante up their share? TI it will, but others are being cau- s. "What the government is propos- is a giant step," says Richard T. hambault, vice-president for high- lution technologies at AT&T. "But we have more homework to do" before ing on.

ven if AT&T, Motorola Inc., and oth- take Flamm up on his offer, it will ough for the U. S. to catch up with an. Not only does Japan hold a 95% ket share in active-matrix liquid- tal displays, the leading technology, Sharp, NEC, and Toshiba are con- ally making clearer and less power- gry screens. U. S. hopes largely are ed on competing technologies, such eld-emission screens, arrays of tiny rors, or gas plasma. "Maybe the nted Japanese technology machine e the wrong decision," suggests Cur- M. Stevens, chief financial officer of troluminescence maker Planar Sys- s Inc. Of course, Japan is working on e alternative technologies, too.

here are political worries as well. For Senator John C. Danforth (R-Mo.) at- s the plan as a thinly disguised "pro- ion subsidy." He calls it "a terrible y for the U. S. to get into and a real version of trade policy." And even if plan survives such sniping, it could victim to Congress' insatiable appetite pork. Washington insiders warn that Pentagon must be wary of lobbying active-matrix screens by AT&T, Moto- , and IBM. Says Joseph Tasker Jr., ctor of federal regulatory affairs at mpaq Computer Corp.: "If Washing- ends up choosing a particular technol- they've screwed up."

he Administration is confident it can t these quagmires. "This is a good mple of the kind of policy we need," s Tyson. If they're right, the picture the U. S. display industry could soon hten. And if they're wrong, taxpay- will foot the bill.

y John Carey in Washington, with i Jones Yang in Seattle, Peter rows in Dallas, and bureau reports

THE ARKANSAS CURSE STRIKES AGAIN

Angry investors say they were burned by White House aide David Watkins

By all accounts, David Watkins is one of President Clinton's favorites. A member of the First Family's tight band of Arkansas aides, Watkins, 52, has toiled in nearly all of Bill Clinton's political campaigns. These days, he is a Presidential assistant, overseeing the White House's vast administrative machinery.

But Watkins, a Little Rock adman who teamed up with Hillary Rodham Clinton in several lucrative ventures, is a man with a past. Interviews with more than a dozen former associates and investors, backed by court documents and financial data, suggest that Watkins' life as a dealmaker has left a trail of disappointed investors. Indeed, he has been associated with a string of failed penny-stock companies from New York to Texas, hawking items from cruises to credit cards. "The public should know what kind of a guy they have in the White House," says an angry shareholder in Amerinet Corp., a Watkins company. "It just isn't right what he has done."

"IT JUST ISN'T RIGHT WHAT HE'S DONE," SAYS A SHAREHOLDER. MANY OF WATKINS' VENTURES FLEW BELOW SEC RADAR

Not all of Watkins' ideas fizzled. Hillary Clinton made $46,000 on a $2,000 investment in his cellular-phone partnership. And Watkins himself has managed to prosper. His federal disclosure form lists a net worth of up to $1.7 million.

WORTHLESS. Back in Arkansas in the 1970s and '80s, Watkins dabbled energetically in small business. Many of his ventures were so small they didn't have to register with the Securities & Exchange Commission. When things went sour, losses to individual shareholders were so modest—usually a few thousand dollars—that few bothered to sue.

One exception was Alan Fleisher. The Smithtown (N.Y.) businessman claimed in a 1991 lawsuit that Watkins and his associate, Clifford E. McFarland, lured Fleisher's family into investing $200,000 in three worthless deals. "The mistake he made," Fleisher says, "was to get me to invest a lot of money." Watkins declined repeated requests for an interview on these and other business dealings. His attorney, Ty Cobb, a partner with the firm of Hogan & Hartson, denies that his client benefited at the expense of shareholders, adding that "Mr. Watkins was in a position to assist startup companies such as Amerinet because of his many...business successes."

In court papers, Watkins and McFarland denied Fleisher's allegations—which the White House says Watkins disclosed before his appointment. Moreover, the investor's charges of securities fraud were thrown out because they were filed too late. Fleisher could have refiled some charges but negotiated a settlement with Watkins in November, 1992, just before the election. Says Al J. Daniel Jr., another Watkins attorney: "There is no complaint now pending."

Fleisher seems far from mollified. He withdrew his suit in return for equity in a reconstituted Amerinet on the understanding that the shares would be equal to the value of his previous investments. But 18 months later, Watkins hasn't come up with the compensation—although Daniel says Watkins still is trying to repay Fleisher. Fleisher says he is threatening to refile his lawsuit.

The most contentious Watkins deal involves Amerinet, which was formed to market "affinity" credit cards. Watkins took the company public through a reverse merger with a Nevada shell company, Clean Machine Inc. In August,

1987, some 85 investors attended a meeting at Las Vegas' Golden Nugget Hotel. Watkins and McFarland urged them to buy shares of Clean Machine, according to several people who were present.

Investors put up $250,000 to buy shares for 6.25¢ each. The impetus, Fleisher's suit alleges, was Watkins' and McFarland's promise of a heady 250% return. When the deal was sealed in November, 1987, the Watkins Group got 31.7 million shares, or 80% of the outstanding common in Amerinet.

LARGE FEES. But shareholders didn't reap much from the deal—despite a 1988 press release that forecast annual revenues of $1.8 million. A financial statement for the first 10 months of 1988 shows that Amerinet chalked up a net loss of $142,000 on revenues of $4,000. Among the expenditures: $78,000 to Watkins-affiliated companies for consulting and management fees, with an additional $100,000 in reimbursements due for cash advances. Disgruntled shareholders say such a pattern was typical, and that Watkins' affiliates, such as the Watkins Group, his merchant-banking firm, would rake off large fees at the expense of investors. By mid-1989, Amerinet had nearly ceased operation.

This was not the only project where Watkins' plans flopped. In December, 1987, he got 1.6 million shares of Cruise of a Lifetime USA Inc. for helping the company raise $150,000 from the public, according to Securities & Exchange Commission documents. The New York concern, which sold franchises to market ocean cruises, folded in 1989.

Investors in Cashland Corp., based in Solvang, Calif., which franchised cash-checking services, fared no better. Fleisher claims he lost $60,000 when a Watkins-owned firm, Franchise Group International Inc., failed to keep a promise to jointly operate some of the check-cashing stores. The outlets never opened, his suit says. Other investors lost about $1.4 million in a 1988 limited partnership that Watkins sponsored for several Cashland outlets, according to court filings. His stores and Cashland's eventually went out of business.

TRAVELGATE. Another enterprise, Sara Care Inc., is barely surviving. A Watkins firm was paid at least $50,000 in consulting fees by Sara Care, which at one time franchised 50 elder-care centers. Sara Care now operates one senior center in El Paso, Tex.

It would be easy to dismiss this trail of bruised bank accounts and broken businesses as a remnant of Watkins' Arkansas past. But controversy has continued to dog him in Washington. Last year, he was taken to task by Congress for backdating personnel appointments and pay raises. Watkins was also a major player in last year's Travelgate flap, which saw the mass firings of White House travel-office workers in what seemed like a clumsy attempt to steer business to an Arkansas travel agency. He was later reprimanded by Chief of Staff Thomas F. McLarty III.

Watkins, still Amerinet's president, failed to reveal his ownership role on his 1993 financial disclosure form. A White House associate counsel contends there was no need to because Amerinet is dormant. But C. Boyden Gray, White House counsel in the Bush Administration, asserts that "government officials must disclose all financial interest, whether it's valued at $1 or $1 million. Otherwise, you can have the appearance of a conflict."

The White House is standing behind Watkins. Now, President Clinton has to hope that his aide serves the White House better than he did investors.

By Michael Schroeder in Washington

DAVID WATKINS' SPOTTY BUSINESS RECORD

Many of the White House aide's deals have gone sour. Some examples:

AMERINET Founded by Watkins in 1986 to market Visa cards. In 1987, it became a public company through a reverse merger with a Nevada shell company. Within 10 months, Amerinet was $142,000 in the red. It has been inactive for four years.

FRANCHISE GROUP INTERNATIONAL This Watkins company signed up investors in 1987 to buy franchised check-cashing outlets from Cashland. The outlets and Cashland eventually went out of business .

SARA CARE Franchise Group International served as a consultant and sales agent for Sara Care, an elder-care franchisor. A Watkins associate served on the Sara Care board. Its 50 franchises are out of business; it now owns a single outlet in El Paso.

CRUISE OF A LIFETIME USA Watkins was the investment banker in a reverse merger of this New York-based franchiser of ocean cruise agencies in 1987. In exchange, he received 1.6 million shares and a board seat. The company failed in 1989.

PEOPLE

ROCK ON A ROLL

Pricey seats may not deter boomer from this summer's concert blast

JAGGER: SELLOUT SATISFACTION?

The season just getti under way, 1994 already loo like a blowout ye for the rock bu ness. Returning the limelight fr their mansions a manicured lifestyl the rockers of y teryear—Pink Flo the Rolling Stones, even a reunited E gles band—are strutting on stage fo curtain call. Other oldie favorites inclu Elton John and two competing 25th- union-of-Woodstock concerts. On t also are hot groups such as Pearl Ja Even Barbra Streisand will hit the ro

The boom is good news for an ind try that has been just limping alo since 1991, when it sold a record $ billion in tickets. But with an improv economy expected to bring out m fans, "the question is by how much beat that record this year," says G Bongiovanni, editor of *Pollstar*, a Fres (Calif.) magazine that follows the c cert business.

BRISK SALES. The bad news for conce goers: Many operators have jacked ti et prices way up. It will cost as much $80 to see Pink Floyd and up to $11 catch the Eagles (parking included). the road for the first time in 27 yea Streisand is asking $350 for some se

Outrageous? Maybe. But even higher-priced tickets are moving, s Ticketmaster President Frederick D. sen. Streisand sold out all five conce in two hours, he says. Nearly 90% the Pink Floyd tickets were sold bef they warmed up their first amp.

There's concern in the busine though, that high prices will hurt so acts. Elton John and Billy Joel are tressing their appeal by doing a j tour—with a top ticket price of $ Even the mighty Stones are charg just $25 to $50. "There are a lot of t ets out there," admits lead singer M Jagger. "We hope there's room" for the acts. Not to mention enough ag baby boomers with gold credit ca who still want to hear them.

By Ronald Grover in Los Ang

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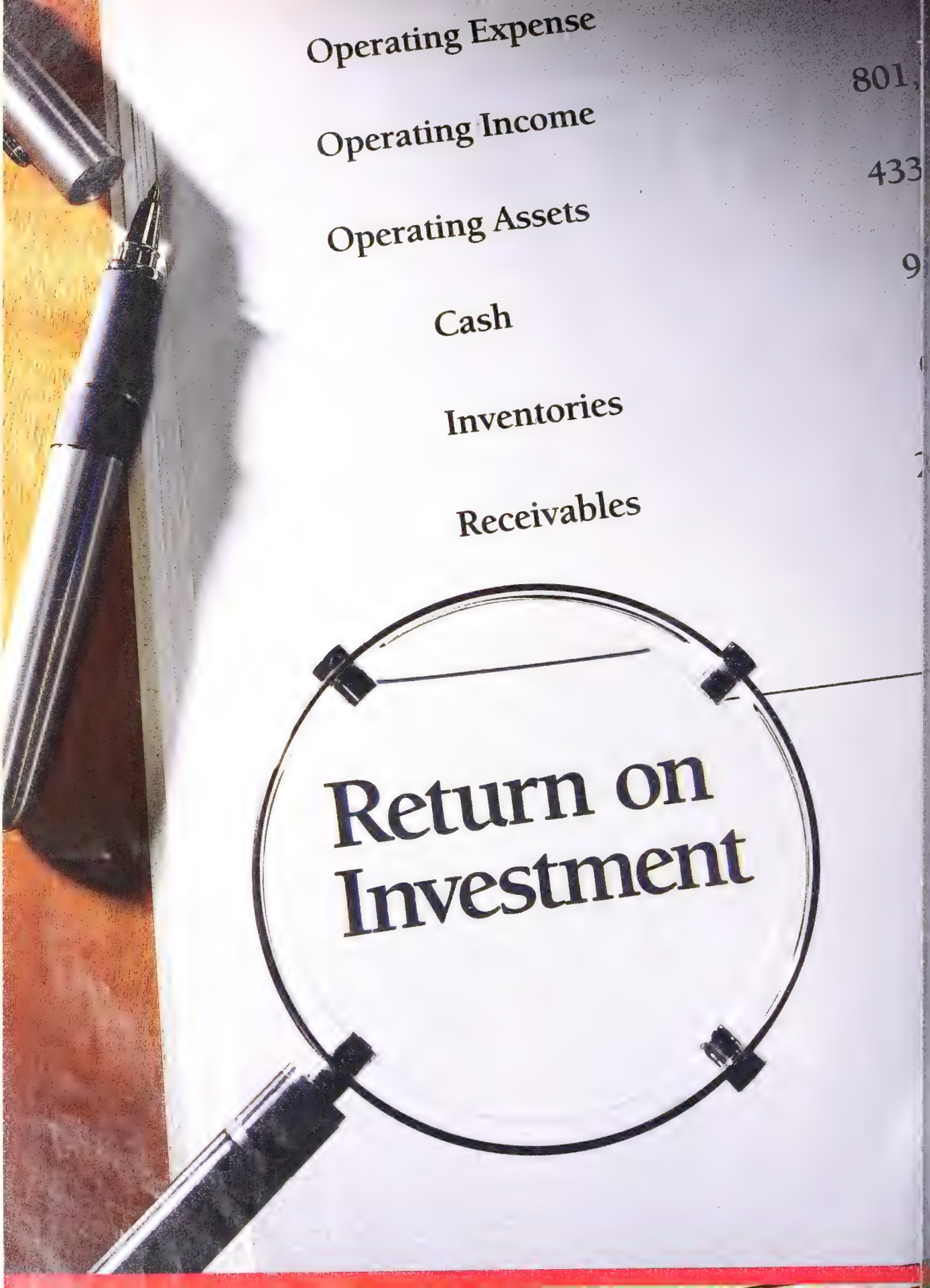
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PEOPLE

SEE BILL. SEE *ZAPP!* SEE THE SEQUEL

Consultant Byham is back—with another simplistic management primer

It's a tale that makes you wonder about the good sense—to say nothing of the literary tastes—of Corporate America.

Once upon a time, William C. Byham, a clever but rather ordinary business consultant, enlisted the help of a professional writer and penned a fable for managers on how to "empower" employees. As if by wizardry, the book—*Zapp!: The Lightning of Empowerment*—became a huge underground bestseller. Indeed, Byham claims more than 1.5 million copies have gone into print since 1989. Written in Dick-and-Jane prose, it's the fictionalized story of how employees can play a more meaningful role in companies if they're empowered to make more decisions.

Now, Byham, chief executive of Pittsburgh-based consultant Development Dimensions International Inc. (DDI), is hoping to zap corporate readers again. The sequel to *Zapp!*, scheduled to be published on May 5 by Harmony Books, a division of Crown Publishers Inc., is called *Heroz: Empower Yourself, Your Coworkers, Your Company.* (The "z" after "hero" is supposed to conjure up memories of *Zapp!*.)

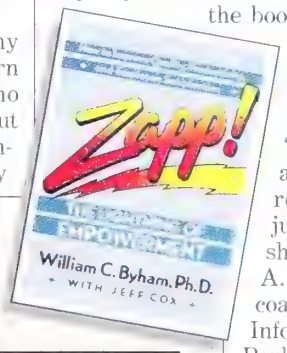
Byham's latest fable is set in the imaginary medieval castle of Lamron. It features heroic knights who defend the kingdom's citizens from fire-breathing dragons by using magic arrows. The arrow producers become dispirited, however, and the citizens begin to flee to other kingdoms that offer better protection and cheaper arrows. Lessons are distilled in memos from the workbench of arrowmaker Art Halegiver. There are also pages from *The Zapp Wizard's Spell Book*, which boasts a recipe for a "magic brew" to help sell ideas to the boss.

Sound goofy? *Heroz* won't win any literary awards. Nor is it likely to earn kudos from management gurus—who typically dismiss *Zapp!* as simplistic. But Byham, 56, who once worked as an industrial psychologist for J. C. Penney Co., doesn't care. He hopes to cast his own spell on managers who will buy the book in bulk for their employees—just as they did *Zapp!*.

Initially self-published, *Zapp!* became a hit largely through Byham's promotional efforts. He printed 200,000 copies and gave away 7,000 to clients. Many were sold by direct mail, before the book was commercially published in 1991. In the end, some 500,000 copies were given away free to companies that book him for speeches or hire his company for training seminars.

Nevertheless, *Zapp!* created unusual fanfare. Byham says IBM bought 40,000 copies. General Electric Co., which gave out Zappometer pads to employees, gobbled up about 30,000. PepsiCo Inc. ha its own edition of the book printed i blue for 23,000 of its employees. Wast Management Inc. purchased more tha 100 copies of the $895 video versio Other promotional items available fro DDI: *Zapp!* pins, coffee mugs, pape weights, headbands, T-shirts, and eve wrapping paper.

PRICEY ADVICE. The book's success ha made Byham a sought-after busines speaker. Last year, he delivered abou 100 speeches. His typical fee: $12,00 for a two-hour lecture, or $15,000 for full day. His consulting firm has als prospered. Byham expects annual re enues to climb by 27%, to $66 million, i the fiscal year that ends on Aug. 3 Says Byham: "I have made millions fro the book."



Why has Co porate Americ embraced By ham's approach "If you give ma agers somethin real thick, they' just stick it on th shelf," says Thom A. Parks, a qualit coach at AT&T Glob Information System Parks uses the 20 page *Zapp!* as an "ic breaker" in trainin sessions. Adds E ward E. Lawler, University of Sout ern California ma agement professor: " may trivialize the i sue of empowermen but it's readable."

With *Heroz*, Byha is seeding the mark with 10,000 fr copies. His consultin firm's account exec tives will promote t book with clients, and Byham plans plug it heavily at upcoming conferenc The early reports aren't half-bad. Havi read a quarter of *Heroz*' 208 pages, Ru sell D. Robinson, an operations manag at Motorola Inc., is already recommen ing the book to colleagues. "It's real good," says Robinson, who once staged "*Zapp!* Bash" for hundreds of emplo ees at which *Zapp!* videos were sho on large-screen TVs.

So be forewarned, employees of C porate America: Like it or not, legio of your bosses—or rather, your coache as they're known in *Zappese*—may so be plugging *Heroz*. For Byham, it loo like another happy ending.

By John A. Byrne in New Yo

MAKE THAT "BUY 'EM": ALSO PINS, COFFEE MUGS, T-SHIRTS...

COMPANIES ZAPPED BY *ZAPP!*

Author Byham's count of *Zapp!* buyers:

	copies purchased
IBM	40,000
GENERAL ELECTRIC	30,000
DUPONT	25,000
PEPSICO	23,000
WAL-MART	10,500
KFC	8,500

The

more

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Obvious, right? Yet so often overlooked. Particularly when it comes to insurance. It's amazing how your property, casualty and life coverage can work for you once you understand it. That's why at USF&G, everything we're doing is directed toward simplifying and clarifying an otherwise confusing process. [In fact, we're out to change the very nature of insurance.] With new talents, technologies and products to draw from, our agents can make your money work harder. [So you can get what you need, and eliminate what you don't.] Ask an independent agent about USF&G, and find out just how we'd handle your business or personal insurance needs [hint:differently].

THE DIFFERENCE IS UNDERSTANDING

USF&G

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"PLUG AND PLAY" A REALITY.

Just about everyone who's ever used a computer has experienced the same thought: Wouldn't it be great if setting up or upgrading your machine was as easy as turning it on?

The idea is called "Plug and Play." People have been talking about it for years. But now, an ongoing partnership between Compaq and Microsoft, working with other industry leaders, is actually making it happen.

Plug and Play is the result of some very fresh thinking in both hardware and software – an accomplishment that tapped the combined engineering expertise of both companies. Together, Compaq® computers and the next version of the Microsoft® Windows™ operating system (code-named Chicago) will deliver the long-promised benefits of true Plug and Play: easy setup, easy expansion and easy connection to peripherals.

Which means no more configuration headaches. No more hidden switches, cryptic codes or mystery.

Even today, Compaq is shipping computers that will take full advantage of Plug and Play technology as soon as the forthcoming version of Windows is available. So the Compaq & Windows combination will quickly become the standard for Plug and Play computing. A welcome reassurance for people who buy computers.

COMPAQ Microsoft®

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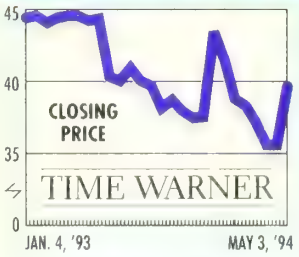
In Business This Week

EDITED BY KEITH H. HAMMONDS

BUSINESS BLANCHES AT SCHOOL REFORM

In a May 5 report, the National Education Commission on Time & Learning proposed a radical overhaul of the U.S. education system—urging schools to break with the traditional schedule of six-hour days and 180-day years. But opposition is brewing from an unlikely camp: business. In Pennsylvania, where 16 amusement parks attract 17 million tourists a year, the recreation industry has stymied efforts to establish a longer school year. And in Utah, pressure from camps and recreation parks led the Cache County School District to stop staggering nine-month schedules over a full year. One criticism: Longer hours will fuel an explosion in teacher pay.

CLOSING BELL



RUMOR TIME

Time Warner is stirring up more drama on Wall Street than in Hollywood these days. After a feverish afternoon of takeover speculation on May 3, the entertainment company's stock jumped 3 .875, to 40. Among the rumored buyers: Seagram, which already owns 14.2% of Time Warner's shares. People close to Seagram President Edgar Bronfman Jr. dismiss the takeover talk. But Seagram is no longer the only name being floated: Sources say cable titan John Malone is mulling a bid, perhaps in concert with Barry Diller and music mogul David Geffen. If that's not enough, add Bell South, Bell Atlantic, and US West to the list. US West already owns 25% of Warner Bros. and could play the white knight.

DATA: BRIDGE INFORMATION SYSTEMS INC.

CONTINENTAL KEEPS CUTTING FARES

After setting off a round of transatlantic fare cuts in early April, Continental Airlines now vows to make the deals a way of life. On May 3, the airline announced cuts of up to 67% on unrestricted fares to Europe—higher than those announced in April but still well below business fares to Europe last summer. "Fares have crept downward as capacity has outstripped demand," says Robert Harrell, head of American Express' air-fare-management unit. Continental's rivals quickly matched on competing routes, but they plan to limit the number of discounted seats. Since Continental serves only five European destinations, rivals hope to limit the damage. Industry sources figure Continental didn't have much to lose, since it attracts fewer high-paying business travelers than other big airlines.

FOR VOTERS, NAFTA IS A NONISSUE

The North American Free Trade Agreement seems to have fizzled as a political issue. In Ohio's Democratic primary on May 3, Representative David Mann, who was targeted by the AFL-CIO after voting for NAFTA, edged labor's handpicked opponent. And in Indiana's Republican primary, Representative John Myers, who angered agribusiness interests by opposing the free-trade agreement, survived after some of his former business backers endorsed a challenger. University of Cincinnati pollster Alfred Tuchfarber says that despite calls for revenge by unions and business, NAFTA has "never been an issue with voters as a whole."

HEADLINER

NO LOVE FEST FOR LOUCKS

Vernon Loucks can't be having much fun. At Baxter International's Apr. 29 annual meeting, investors in the underperforming health-care company repeatedly called for the chairman's resignation and expressed anger about his $500,000 bonus in a year when the company failed to meet its objectives. And a resolution mandating separation of the offices of chairman and CEO, both of which are now held by Loucks, won support from a hefty 30% of shareholders.

No surprise there. A series of restructurings have failed to lift Baxter's profits, and its stock has dropped about 30%, to 23, since early 1993. Investors are still angered, too, by Baxter's guilty plea last year to a U.S. criminal charge of complying with the Arab boycott of Israel.

But so far, Loucks appears to retain the support of his board, which gave him a awkward standing ovation at meeting's end. Director George St. Laurent, chairman of Western Bank, says he left the meeting with "a positive view of where the company's headed." Loucks's message to shareholders: "Come back next year" for gladder tidings. They'll be back for sure. Will Loucks?

By Susan Chandler

THE ROBOT WORKERS ARE COMING

With a large eight-legged robot named Dante 2 looking on, NASA officials announced on May 2 a new joint venture in robotics with Carnegie Mellon University. Starting with $2.5 million, the new Robotics Engineering Consortium will work to develop marketable robots for a host of jobs. Within three years, says chief scientist William "Red" Whittaker, the consortium hopes to have robotic food harvesters on the market. It also plans to develop a rover to be launched to the moon by 1997.

THIN ICE FOR BRUCE McNALL?

Bruce McNall, the coin dealer who brought ice hockey superstar Wayne Gretzky to Los Angeles, is heading to the penalty box. Under federal grand jury investigation for possibly falsifying loan documents, McNall last month resigned as head of the National Hockey League's board of governors. On May 1 scrambling to pay down crushing bank debt and salvage his real estate and sports empire, he sold a 72% interest in his Los Angeles Kings to Jeffrey Sudikoff, chairman of long-distance carrier IDB Communications Group, and Joseph Cohen, a former executive at Madison Square Garden.

ET CETERA . . .

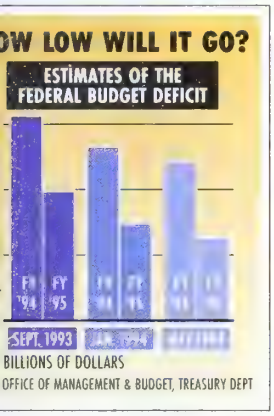
- Another resignation at IBM PC chief Robert Corrigan, a respected veteran, quit.
- Stanley Gault, though, extended his contract at Goodyear through 1995.
- LDDS Communications buys $2 billion for Williams Cos. long-distance operation.
- Broderbund Software abandoned its appealing plan to merge into Electronic Arts.

EDITED BY OWEN ULLMANN

THE DEFICIT: WHY CLINTON WON'T SEIZE THE MOMENT

t's enough to make Ronald Reagan and George Bush cry. Despite Republicans' attempts to paint him as a free-spending liberal, Bill Clinton is presiding over a precipitous op in the federal budget deficit, a feat that eluded his two P predecessors. With economic expansion swelling receipts, e deficit is shrinking beyond Administration predictions. d the surprising gains on the economic front give President nton new leverage to repel calls for deeper spending cuts m deficit hawks in Congress.

Indeed, new budget estimates show a trend that's almost too good to be true. Clintonites say there's a solid chance the fiscal '94 deficit will be $10 billion below January's forecast. The shortfall for '95 could drop to $165 billion—a third lower than expected 15 months ago. Progress could be reversed if rising rates drive up debt-service costs, but the White House hopes the worst rate spikes are over. "At the moment the signs look golden," one cheerful Treasury official says. The glee is understandable. When Clinton unveiled his economic plan in 93, he projected a modest two-year dip in the deficit. But v rates fueled an unexpectedly strong expansion. The GOP esidents wish they'd been so lucky: Recessions following th of their budget-cutting plans produced ballooning deficits. The disappearing red ink is glum news to congressional def- fighters, who see the rosy outlook undercutting their dget-cutting drive. "I could set myself on fire and jump rough hoops and we still wouldn't get any more deficit re- ction around here," concedes Representative John R. Kasich -Ohio), the House Budget Committee's ranking Republican.



HERE'S ALICE? Would-be budget slashers complain that White ouse resistance to further cuts is disingenuous. Last year, nton said deeper reductions could abort a shaky recovery. w, he warns that more budgetary surgery could disrupt a rong expansion. "It sounds a lot like Alice in Wonderland," ouses Representative Robert E. Andrews (D-N. J.), co-author a prominent spending-cut plan.

There's a reason for Clinton's timidity: Painful spending cuts uld alienate the liberal Democrats he needs to pass health- re and welfare reforms. But political expediency will mean ouble later. Even if his health plan curbs medical outlays, nton won't tackle other entitlements before the '96 election. The Administration sees no problem in stalling, but it can't unt on the deficit vanishing by itself. Social Security runs a 00 billion annual surplus, which is used for other programs. e surplus will evaporate as Baby Boomers retire. "We have s terrible structural problem and no plan to deal with it," la- ents Carol Cox Wait, president of the Committee for a Re- onsible Federal Budget, a nonprofit research group.

Federal Reserve Board Chairman Alan Greenspan also ets that the deficit will start climbing again in the late '90s er deep defense cuts run their course. But with voters feeling good about the economy now, Clinton sees no need to ladle out another cup of austerity anytime soon. That's swell politics, but the President may be passing up one of the best opportunities in recent times to make a permanent dent in federal entitlement spending.

With Richard S. Dunham

SOUND OF SILENCE AT THE FTC

The Food & Drug Administration's stringent food-labeling rules take effect with great fanfare on May 8. But over at the Federal Trade Commission, which is still agonizing over companion advertising standards, there is only the sound of silence. That's no surprise to regulatory experts. Although President Clinton has brought a more aggressive enforcement philosophy to town, the FTC seems like a Republican throwback. "They're slow and pro big business," gripes Representative John J. Moakley (D-Mass.).

Compared with the FDA and the Justice Dept.'s antitrust division, the FTC is passive. The problem is that its five members are hopelessly deadlocked. Two are free-market conservatives, two are pro-regulatory moderates, and the swing vote—independent Mary L. Azcuenaga—can't make up her mind. The result: stalemate on everything from a Microsoft Corp. antitrust investigation to a proposed ban on RJR Nabisco Inc.'s Joe Camel cigarette ads to the current food flap. On that issue, the activists want to prohibit exaggerated health claims, while the conservatives would permit such claims so long as there is at least modest scientific evidence to support them.

STEIGER: PRO-ENFORCEMENT

Clinton will have a chance to break the gridlock in September, when the term of Commissioner Deborah K. Owen, the most conservative member, expires. A Clinton nominee could team up with the two enforcement activists, Republican Chair Janet D. Steiger and Democrat Dennis A. Yao, both named by Bush. Leading candidates—all tough enforcers—include Tennessee Attorney General Charles Burson, ex-New York Attorney General Robert Abrams, and former FTC member Robert Pitofsky. Until the job is filled, the FTC is forfeiting a chance to reclaim its past clout.

Steiger says the FTC hasn't gone soft, citing April's record $2.4 million settlement with Pittsburgh-based General Nutrition Cos. for deceptive ads about weight-loss products. But consumer groups see GNC as a rare exception. Still, come next fall, business may discover that a muzzled watchdog will again be nipping at its heels.

By Catherine Yang

EUROPE

THE PERILS OF PRIVATIZATION

THE GRAND EUROPEAN SELL-OFF WON'T BE SO EASY

With privatization on a mammoth scale under way across continental Europe, investors will be asked to pony up more than $150 billion over the next few years. Up for grabs are numerous prime properties, ranging from auto makers and leading banks to giant oil and telecommunications companies. But will the auctioning process work as smoothly and profitably as it has in Britain? Probably not. In both France and Italy, privatization efforts are suddenly confronting a number of new hurdles.

FRANCE: INVESTORS MAY BE SATED

It was another successful privatization, but one that sent some alarming signals. When the books closed on May 5 on the stock sale of Union des Assurances de Paris, France's largest insurance company, the government could claim the deal was oversubscribed. But demand was far weaker than in earlier sell-offs, such as the January sale of French oil giant Elf Aquitaine Inc., when investors sought 12 times the available shares. And although the UAP sell-off earned $3.4 billion for the government, the take was $1 billion less than originally expected.

The UAP experience poses worrisome questions about the strength of investors' appetite for more privatizations, in France and Europe in general. After eight big European sell-offs in two months, "there's definitely indigestion out there," says Vicky Sleddon, manager of Kleinwort Benson Ltd.'s European privatization fund. And the banquet is far from finished. Europe's governments are still in the early stages of a massive sale of corporate crown jewels. On May 3, Germany cleared the way for a sale of Lufthansa.

If more sell-offs receive the lukewarm reception given to UAP, governments may have to cut prices or table deals, losing badly needed revenues. The nervous state of the world's equity markets will complicate things even more.

The stock performance of newly privatized French companies hasn't helped the privatization push. Of France's three big sell-offs since last fall, Banque National de Paris slipped back to its offering price in March, while Elf and Rhône-Poulenc dipped below their sales prices. All have recovered slightly, but there has been no quick killing for investors. The stocks "have performed abysmally," complains Albert Morillo, chief European investment officer for Scottish Widows Investment Management Ltd., a large institutional investor. The cool reception to UAP was especially surprising, given critics' charges that the offering price was low.

Investors blame the disappointing French showing on several factors. The recent weakness of bank and insurance stocks around Europe, because of worries about interest rates and bad real estate, have hurt. So has France's tight monetary policy, which is prolonging the national recession and dampening corporate profits. Another factor is the government's habit of selling major stakes in privatized companies to "hard cores" of friendly buyers—usually other big French institutions—which would probably block unfriendly takeovers.

> Eight big deals in two months have some investors pushing back from the table

French officials had considered postponing the UAP sale, but budgets argued otherwise. The French need cash to prop up ailing state companies such as Air France and Groupe Bull, and for subsidies to appease students, fishermen, and other truculent interest groups.

France's conservative rulers also realize that elections next spring could cut short their sell-off, as happened when the Socialists killed their 1986-87 privatization drive. The government still has nearly 20 properties to auction off.

DELICATE MOMENT. So the conservatives may speed up their schedule—even though the outlook for equities remains weak and competing deals from outside France are coming. Another insurer, Assurances Générales de France, will be offered next fall, instead of Renault as originally intended. Labor opposition to selling the auto maker has prompted Prime Minister Edouard Balladur to postpone the Renault deal until after next year's elections. That probably means more headaches for the French. Fund managers think Renault, Europe's most profitable indigenous auto maker, would be a much easier sell than another financial stock such as AGF.

All told, it's a delicate psychological moment for privatizations. For now, the French government hopes investors will take the long view and recall that the 1986-87 sell-off of Saint-Gobain, Alcatel

thom, and other companies eventual- produced gains of more than 100%. if investors start souring on deals, n such fond memories won't help.

By Stewart Toy in Paris, with William sgall in New York

ALY: A TRICKY TEST OR BERLUSCONI

elf-confidence isn't something that Silvio Berlusconi, Italy's new Prime Minister, has in short sup- When his closest political allies be- debating how to proceed with bil- s of dollars of privatizations late April, the magnate- ned-politician jetted off to Sardinian beach house for he sun. "I haven't yet decid- what to do about it, but it's nething we can solve easi- said Berlusconi just before left.

He'd better bone up fast. en though his government n't take over until mid-May, vatization is emerging as the biggest point of disagreement in his unwieldy center-right coalition. Italy started its huge sell-off only five months ago. The lion's share is still to come, ranging from insurer INA to STET, the sprawling telecommunications company (table).

Berlusconi's coalition members agree on the need for privatization but not on the means. The main issue is the role of Italy's dealmaker par excellence—Mediobanca, the secretive Milan-based merchant bank. Key minority stakes in such corporate giants as Fiat and Pirelli make Mediobanca and its honorary chairman, Enrico Cuccia, 87, the nerve center of Italy's big industrial clans. It's a system similar to the influence German banks have over German industry. But in Italy, Mediobanca has the entire field to itself.

In recent days, Mediobanca has flexed its muscles. It has taken effective control of two of Italy's largest banks—Credito Italiano and Banca Commerciale Italiana—just weeks after they were privatized. That shocked Italians who had hoped that sell-offs would send some fresh air through the clubby Milan bourse. Romano Prodi, the head of state-owned IRI, warned that Mediobanca "is now at the center of an enormous concentration of private power aiming to take over privatized public companies."

BIGGER TARGETS? Cuccia supporters argue that the two privatized banks will be well-served by being brought into the Mediobanca web. Banca Commerciale, for example, has long been Mediobanca's key commercial-banking ally. "Mediobanca succeeds simply because it is the best around," says Fiat Chairman Gianni Agnelli, one of Cuccia's closest allies.

But Prodi and others fear that Cuccia is out for bigger corporate targets. Indeed, it has been an open secret in Milan for months that Mediobanca has been preparing a hard core of shareholders—led by Pirelli and France's Alcatel—to take key stakes in STET. With its $6.5 billion cash flow and a $27 billion four-year capital investment program, STET would be a glittering prize.

This time, it could be an uphill battle for Mediobanca. The National Alliance, Berlusconi's neofascist ally, wants Rome to retain strategic stakes in public utilities such as STET. Northern League populists, backed by small and medium-size businesses that view the industrial dynasties with great suspicion, want privatizations—but with new rules barring Mediobanca and its allies from controlling groups such as STET. "If Mediobanca, Fiat, and Pirelli are running the show, they are not going to make STET a global competitor," says Gianfranco Pagliarini, the League's economic strategist.

Berlusconi will have to decide the issue. Trouble is, he may not be an impartial judge. In mid-April, Mediobanca replaced Goldman, Sachs & Co. as key adviser to Berlusconi's $7 billion Fininvest media empire, which plans to float off shares in its Mondadori publishing unit next June. With a potential conflict of interest like that, it's going to take more than self-confidence for Berlusconi to solve Italy's privatization puzzle.

By John Rossant in Rome

ITALIAN GEMS ON THE BLOCK

Company	Business	Sell-off date	Value Billions of dollars
INA	INSURANCE	June, 1994	$6
STET	TELECOM	Nov., 1994	$18
ENEL	ELECTRICITY	Dec., 1994	$20
ENI/AGIP	OIL & GAS	1995	NA

DATA: BUSINESS WEEK

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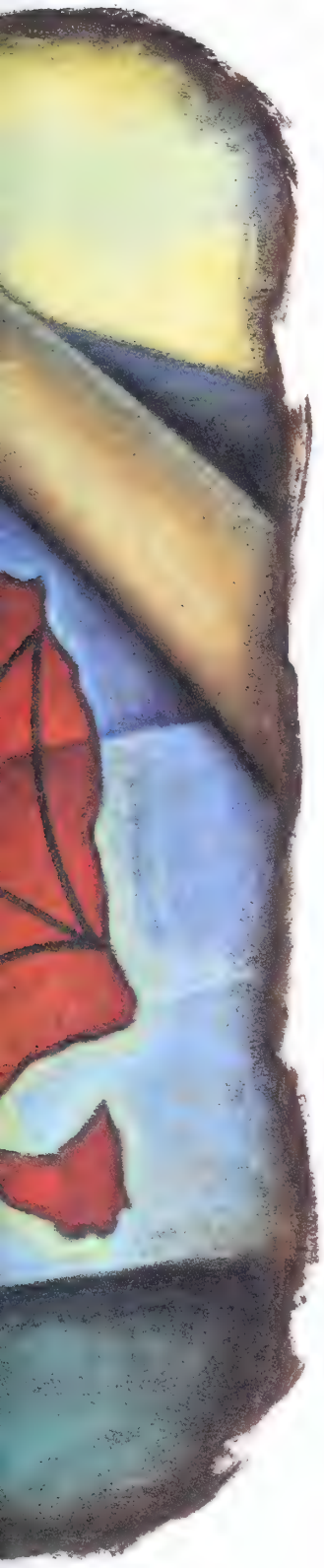

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MANDELA: DOING EVERYTHING HE CAN TO BOOST BUSINESS CONFIDENCE

NOW, CAN MANDELA WIN THE BATTLE FOR GROWTH?

His early economic decisions will be key to luring outside investment

Historians may come to identify the evening of May 2 as the moment it happened. More than 340 years after Dutch explorers first landed, political power in South Africa passed from the white minority to an elected, black majority government. Outgoing President F.W. de Klerk conceded defeat, pledging to Nelson Mandela his full cooperation in a Government of National Unity. And Mandela invited de Klerk's National Party and all other losing parties "to join us in working together to tackle the problems we face as a nation."

The trick now will be translating the euphoria over democracy into economic progress for millions of black South Africans. And achieving growth and creating jobs depend in part on investment from and trade with the outside world. That's why executives and investors around the globe will be watching for the new government's early economic moves.

SUPERSTRUCTURE. Some money is already beginning to flow in. The U.S. pledged to double its aid to South Africa, to $600 million over three years. Britain, too, will kick in $150 million over the same period. International Finance Corp., the private investment arm of the World Bank, announced it would include South Africa in its emerging-markets index by summer, which could spur a new wave of portfolio investment. Says Robert Weinberg, analyst at S.G. Warburg Securities Ltd. in London: "A trickle of money could become a river eventually."

To help that become a reality, the African National Congress seems to be bending over backward to boost investor confidence. The key post of Reserve Bank governor, for example, seems guaranteed to go to current Governor Chris Stals, who has run a tight monetary policy and won the plaudits of business.

There's also talk that Mandela wants to establish a three-member "super Cabinet," with each superminister taking ultimate responsibility in their area: law and order and foreign affairs, social welfare, and finance and economics. The leading contender for the economics post is ANC economics chief Trevor Manuel.

Involved in the economic department for only three years, Manuel is relatively inexperienced. But he has made a point of courting business, hoping to assure executives that the ANC is market-oriented. And an ANC superminister of economic affairs would make it politically acceptable for incumbent Finance Minister Derek Keys, a favorite in the business community, to be reappointed. Manuel's No. 2, Tito Mboweni, looks a likely bet for the Trade & Industry post.

Even with the careful casting of top positions, the pressures on the new coalition government will be strong. Mandela is warning that the new government's centerpiece will be the ANC's Reconstruction & Development Program (RDP), its blueprint for a major public works and infrastructure overhaul. Attempts by other parties to undermine the reconstruction effort would cause serious ruptures, he said.

CREDIBILITY. Strains are already being felt. The RDP, though designed to be fiscally conservative, has the potential to cost plenty. The ANC policy says it can be financed without an overall increase in taxes or a major rise in the budget deficit. Much of the funding would come from a redirecting of spending from defense and duplicative apartheid bureaucracies. Revenues generated by a strong economy, now expected to grow 4% this year, would also help, say ANC planners.

But opposition parties are openly skeptical. "The RDP is going to hit citizens' wallets," warns Dawie J. de Villiers, a member of de Klerk's outgoing cabinet. National Party Cabinet members and opposition members of Parliament are expected to push the ANC to lengthen the five-year deadline it has set for building 1 million new houses, electrifying 2.5 million homes, and creating millions of new jobs. And they could lobby hard for a slower reallocation of resources from whites to blacks.

Right now, though, relief is the feeling shared across the country, despite some remaining technical glitches in the election. A government with credibility is in power. And South Africans are finally daring to hope that the violence may be over. Hospitals that had made elaborate plans to deal with expected violence during the election week reported their quietest period in recent memory. If it can last, such stability may end up being the biggest boost to business confidence.

By Alan Fine in Johannesburg

WHAT BUSINESS SHOULD WATCH FOR

- Appointment of key government officials, especially current Reserve Bank Governor Chris Stals and Finance Minister Derek Keys
- Launching of new public-works programs without major tax hikes or more deficit spending
- How well the ruling ANC and opposition parties cooperate

EDITED BY STANLEY REED

VILL PALESTINE'S PEACE DIVIDEND BUY PEACE?

Although the ceremony was interrupted by unseemly last-minute haggling, Palestine Liberation Organization Chairman Yassir Arafat and Israeli Prime Minister zhak Rabin finally signed an agreement in Cairo on May 4 Palestinian self-rule. The Israelis will now withdraw their ops from the West Bank town of Jericho and from much of za. Police duties and civil administration of these areas soon be handed over to Arafat's followers.

So begins a planned five-year experiment with Palestinian onomy that will be crucial in determining whether the re- n can find a lasting peace. Arafat, a career revolutionary h no experience in government, is going to have his hands just keeping things under control, particularly in Gaza. ne 40% of Gazans are unemployed, half live in squalid igee camps, and many of them prefer Hamas, the militant mic group, to Arafat.

To try to sweeten the poisonous mood, the outside world, by the U. S., is raising funds to create a ce dividend. The a is to lay the undwork for a private investment boom t will win over the ny Palestinians who ieve Arafat has conded too much to Israel. "The economic ds of peace need to sown along with the itical seeds," says a ior Clinton Administration official.

The effort is being rdinated by the rld Bank, though st project deals will be concluded between the PLO and individual donors. So far, 40 donors have pledged $2.4 billion in . The bank has drawn up an initial blueprint to spend 2 billion over three years on infrastructure, technical assance, and startup costs for the new Palestinian Authority.

RISKS. The money could easily go to waste. Caio Koch-We, World Bank vice-president for the Middle East and North rica, acknowledges that there are big risks. He fears that tinued instability in the Palestinian entity could discourage private investment that must be "the primary engine of nomic growth." He also worries that donors will rush to d big-ticket projects that could turn into white elephants. Another key question is whether the PLO, long an exile up dominated by one man, can transform itself into a real ministration. Donors warn that they will stop the flow of ds if they aren't being well spent. The Palestinians have ated an agency called the Palestinian Economic Council Development & Reconstruction (PECDAR) to supervise the velopment projects. But Arafat has yet to give PECDAR ch authority, and its chairman, Ahmed Qurie, is rumored to contemplating resignation. A May 9 PECDAR board meeting Tunis may determine its viability.

Also controversial is an Israeli-Palestinian economic accord signed in Paris on Apr. 29. There are some clear pluses in the deal for the Palestinians. They can collect income taxes and are to receive tax revenue from Arabs working in Israel and from duties on goods bound for the self-rule areas. And they are promised much greater access to the Israeli market for their products. But some Palestinians worry that the deal doesn't go far enough in guaranteeing them access to badly needed jobs in Israel. They also suspect the accord will serve to bind the territories closer to Israel and continue their isolation from Jordan, Egypt, and other nearby Arab countries. If so, this could chill investment from wealthy Palestinians and other Arabs.

Still, some potential investors say they are pleased that the ground rules have at last been established. One major player, Kamal Shaer, a Jordanian who heads a $200 million investment fund called Palestinian Development & Investment Inc., says his group plans to "link up with affiliates in the West Bank in key sectors such as housing, industry, and tourism that will focus on job creation and exports."

In the U. S., Builders for Peace, a Washington-based Arab-American and Jewish-American group, is busy identifying investment projects in the territories. It has helped Culligan International, a subsidiary of Florida-based Astrum International, set up a demonstration water-purification project in Bethlehem. James Zogby, Builders' co-chair, wants the U. S. to extend most-favored-nation status and its free-trade agreement with Israel to the territories. "This would be a major spur to Palestinian industries," he says.

But most investors are taking a wait-and-see stance. Benny Gaon, CEO of Koor Industries, Israel's largest company, says his plans for investing in the territories are on hold until the Palestinians show they want Israeli partners. "No thinking businessman is going to pour capital into a market that is starting from scratch," adds Mohammed Asfour, head of Amman's Chamber of Commerce. The PLO, the Israelis, and their Western backers have a lot of work to do to change that attitude.

By Amy Borrus in Washington, John Rossant in Rome, and Neal Sandler in Jerusalem

THE GAZA STRIP: INSTABILITY COULD KILL PRIVATE INVESTMENT

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APPAREL

THE LIZ CLAIBORNE COLLECTION: SAKS FIFTH AVENUE DROPPED THE CORE LINES LAST SUMMER

A SAGGING BOTTOM LINE AT LIZ CLAIBORNE

The fashion giant faces a midlife crisis—with plans to "reimage"

Can a huge, troubled apparel designer that was a high-flier in the 1980s remake itself for the 1990s? That's what anxious department-store executives, nervous shareholders, and disillusioned shoppers are wondering about Seventh Avenue titan Liz Claiborne Inc.

Claiborne's raiments were the uniform of choice for baby-boomer women climbing the career ladder in the 1980s. But sales of the $2 billion apparel manufacturer have flattened, and operating income has plummeted (chart). The company has been bedeviled by inventory problems and its inability to make a key acquisition pay off. It has done little to instill loyalty to the brand among the waves of women who have entered the workforce since the boomers. And key executives have left, including founder Liz Claiborne and her husband, co-chairman Arthur Ortenberg. Both retired from the company in 1989 and sold their stock and moved to Montana in 1990.

Shareholders are wondering whether their company can thrive without them. After peaking in 1991, Claiborne's net income slipped 2% in 1992, then plunged 42% in 1993. Last year, for the first time in the company's history, sales fell for the core lines—Liz Claiborne Collection, Lizsport, and Lizwear—sliding 7%, to $1.1 billion. Results for the first quarter of 1994, ended Apr. 2, were also dispiriting. Sales inched up 2%, while net income dropped 35%, to $27.4 million. The company said it didn't expect a dramatic improvement in the second quarter. Its stock has skidded to the mid-20s, from 50 in 1991. "Most apparel companies get up to a certain size and hit a wall," says one of Claiborne's largest institutional investors. "Unfortunately, a lot of them fall apa[rt]. We hope that's n[ot] what's happened here."

> The baby boomers whose skirt-tails Claiborne rode in its good years now have other demands on their budgets

Investors' restiveness boiled over last yea[r] when a group of ang[ry] shareholders filed a la[w] suit in U.S. Distri[ct] Court in Brooklyn alle[g]ing that several Cl[ai]borne executives kne[w] that earnings we[re] about to collapse, ini[ti]ated a stock buy-ba[ck] program to boost t[he] price, and then dump[ed] their stock. A simil[ar] suit was filed in Marc[h]. A lawyer for Claibor[ne] says the company wi[ll] fight the charges.

Battling the busine[ss] issues could prove ev[en] tougher. Claiborne['s] marketers are hatchi[ng] what they call a "[re]imaging campaign" [to] lure shoppers back, wi[th] a spruced-up Claiborne boutique, ne[w] ads, and a plan to persuade departme[nt] stores to staff up in their Claibor[ne] areas. And there will be more change[s]. On Apr. 22, the company announced th[at] Paul R. Charron, 51, who was pass[ed] over for chief executive at VF Cor[p.], had been hired as Liz Claiborne's vi[ce]-chairman. Though Claiborne CEO Jero[me] A. Chazen, 67, says he has no plans [to] retire, a source close to Charron says [he] will assume the CEO post in 18 month[s].

DECLINING FORTUNES. Chazen, who h[as] been with the company almost since [its] inception—he roomed with Ortenberg [in] college—bristles at the notion t[hat] founders' departure had anything to [do] with the company's declining fortune[s]. Claiborne, he says, is the victim of t[he] woes besetting the department-sto[re] business. "The world has changed," sa[ys] Chazen, known as a skilled schmooz[er] who excels at cultivating relationshi[ps] with department stores. "The dynam[ic] growth of the department stores in t[he] 1980s has slowed considerably. We ha[ve] to sit back and say, 'O.K., this is a n[ew] period in Liz Claiborne's life.'"

That's too bad, because the old l[ook] was pretty good. In its heyday, Cl[ai]borne was regarded as the smarte[st], most efficient apparel outfit arou[nd]. "When people were hired away fr[om] Claiborne, their new employers thoug[ht] they were getting some magic," sa[id] one ex-executive. Between 1985 a[nd] 1991, sales and net income almo[st] quadrupled.

Today, Claiborne seems neither magi- nor efficient. Last year, the company d to liquidate roughly $300 million rth of unsold merchandise, says Lau- ce C. Leeds Jr., managing director of kingham Research. Chazen acknowl- es some glut but blames overly opti- tic projections by department stores. ere was a very strong feeling on the t of department stores that the con- ner part of the economy would be ulous" by the middle of 1993, he says. e surge didn't materialize. Not ev- one buys the theory that depart- nt-store forecasts were to blame. Crit- argue that Claiborne's apparel just n't appeal to consumers. "For them to me the stores now is nonsense," says institutional investor.

KED RESULTS. Chazen admits that be- se Claiborne was designing and pro- ing apparel as much as nine months advance of shipping it to stores, it ldn't cut back in time. In an effort to vent a recurrence, he brought in con- tants Kurt Salmon & sociates to help Clai- rne shorten its pro- ction cycle from 40 eks to 30 weeks.

But the question of st concern to in- stors is what Chazen d Charron will do to p-start growth. Clai- rne is so dominant in partment stores that re's not much room expand. In 1993, 45% Claiborne's sales came m four companies: lards Department res, May Department res, Macy's, and Fed- ated Department res. "Claiborne has nausted the market in," says apparel con- tant Alan Millstein.

Efforts to expand its nchise beyond women's sportswear ve yielded mixed results. Sales of the e, higher-priced Dana Buchman line, example, jumped 23%, to $90 mil- n in 1993. "Dana Buchman is a sensa- n for us," says Rose Marie Bravo, esident of Saks Fifth Avenue. But es of Elisabeth, Claiborne's line for ge-size women, dropped 11%, to $144 llion. Men's sportswear fell 14%, to 1 million. And sales of dresses and ts plummeted 24%, to $130 million, 1993.

Worse, many department-store buy- s feel Claiborne's clothes have lost the n they once had; Saks dropped Clai- rne's core sportswear lines last year. iz had an internal sense of style that s very modern," says a former Clai- borne executive. "After she left, the mer- chandise became a little stale."

Industry-watchers say Claiborne has- n't made much of its best opportunity to grow. The company's mass market lines, Villager, Russ, and Crazy Horse—ac- quired in 1992 from bankrupt manufac- turer Russ Togs Inc.—generated $79 mil- lion in sales for Claiborne in 1993 but have not yet turned a profit. Todd Slater, an analyst at UBS Securities Inc., believes the lines could make Claiborne a powerful supplier to Sears, Penney's, and Montgomery Ward. Charron's back- ground at VF—which shifted its focus from department stores to mass mer- chants in the 1980s—is expected to help.

Still, the company has to reach out to new consumers. The baby boomers whose skirt-tails Claiborne rode in the 1980s now have mortgages, kids, and tight budgets. Many women in their twenties think of Claiborne as a brand for older women. "Last time I saw Liz, I breezed through and said, 'There's noth- ing really here,'" says Marisa Kuhn, 24, a sales assistant at a Manhat- tan brokerage firm. Kuhn, who plans to spend $600 to $700 on clothes this spring, will check out DKNY and Ann Taylor instead.

CEO JEROME CHAZEN: "THE WORLD HAS CHANGED"

Claiborne is counting on the reimaging effort to bring in shoppers. Marketing never has been a priority for the company; word-of-mouth and new department- store openings carried Claiborne. Now it is ask- ing stores to hire extra sales clerks for its bou- tiques. In a test of the program, Claiborne of- fered to cover the costs if sales didn't pick up. It never had to. But with many retailers expanding private-la- bel lines and rivals likely to clamor for similar deals, the gambit could meet re- sistance. Good products will help: Buyers say Claiborne's fall lines are a step up. "They're getting back to clothes that look fashionable but are mainstream and understandable," says Barbara Dovolis, a buyer at Dayton Hudson Corp.

The company knows it has to raise its profile in shoppers' minds. "We real- ize we need to do it better," says Wendy Banks, senior vice-president for market- ing. Millstein thinks it's overdue. Clai- borne's marketing efforts, he says, are "somewhere back in the 1950s." For a brand that's struggling to catch up with the 1990s, that's no place to be.

By Laura Zinn in New York

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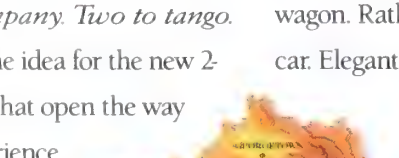

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ADVERTISING

STEVE DWORIN TRIES TO REACH OUT AND SAVE AYER

The slumping ad agency is counting on its hotshot new CEO

Steve Dworin seems puzzled when asked whether he plans to keep a colorful tapestry hanging in the 35th-floor lobby at his new employer, advertising agency N W Ayer Inc. It was designed by his predecessor, Jerry J. Siano, and contains the phrase "big idea" woven into a pattern of interlocking shapes. "We'll keep it," Dworin says after a pause, "unless Jerry wants to hang it in his house."

Big ideas have seemed scarce at Ayer for some time, which is one reason Dworin replaced Siano as chief executive on Apr. 18. That may also explain why Dworin appears to have paid little attention to Siano's tapestry—or its inspirational message. He has more pressing things to worry about in taking command of Ayer, a venerable but much troubled shop.

Start with AT&T, one of Ayer's linchpin clients, which recently pulled $150 million worth of long-distance advertising. Ayer retained $50 million in AT&T business and won a further $40 million in billings on another AT&T account. But Dworin has to make sure the blow doesn't cripple an 86-year client relationship that has produced such memorable campaigns as "Reach out and touch someone."

"FRESH LOOK." More broadly, Dworin must change a perception that the nation's oldest ad agency has lost its way. Clients have left, ownership has changed, and two very public efforts to merge with other agencies have unraveled. Some marketers even question whether Ayer's large size—but lack of a global network—leaves it ill-equipped to compete in an industry increasingly divided into nimble minnows and multinational whales. Even as they help Ayer celebrate its 125th anniversary this year, clients agree it needs a shakeup: "All organizations become inbred," says Philip Guarascio, general manager of marketing at General Motors Corp. "You sometimes need a fresh look."

Dworin is nothing if not fresh. An account manager who regularly works 13-hour days, he is the first CEO to come from outside Ayer. Although the 40-year-old has spent much of his career at J. Walter Thompson Co., he made his name at Deutsch/Dworin, a flashy creative shop he helped build from $90 million in billings to $275 million in two and a half years. "I see him as a catalyst," says Richard Humphreys, former CEO of Saatchi & Saatchi Advertising, who heads an investor group that bought 60% of Ayer from its managers in March, 1993. "If Ayer is the glass of water, Steve is the Alka-Seltzer that's going to make it fizz."

No question, Dworin has an effervescent reputation. When he left Deutsch/Dworin last February, he instantly became the most sought-after executive on Madison Avenue. Saatchi and Lintas Worldwide were among a half-dozen agencies that wooed Dworin. Humphreys won him with a contract that rival executives put at more than $1 million a year with bonus.

Now, however, Dworin must grapple with the exalted hopes that come from being dubbed advertising's most wanted man. "He has been hung with a millstone of expectations," says Burton J. Manning, who turned around a similarly ailing J. Walter Thompson in 1987. "It could be unfortunate if he doesn't have an instant success."

TOUGH DIAGNOSIS. Just figuring out what's wrong will be hard enough. Ayer's billings dropped 9.6% in 1993, to $945 million, the latest in a string of bad years (table). Yet unlike some shops, whose woes can be traced to bad management or bungled campaigns, Ayer is groping through a miasma of troubles: lack of leadership, weak financing, difficult clients, and so on. With revenues continuing to slide—down 7.7% in 1993 to $108.5 million—Dworin says Ayer's staffers are too demoralized to compete effectively for new business: "When an agency has gone through tough times like we have, people start thinking 'Why do we deserve to win?' "

Many of Ayer's troubles stem from a shortage of capital. Prior to Humphreys' investment, Ayer was losing money after servicing its steep bank debt. Siano responded by selling off ma

AYER DEFLATED

Key account moves in the last three years		Annual billings (millions of dollars)
RESIGNED	AAMCO TRANSMISSIONS	$15
LOST	AT&T Consumer long-distance	150
	STERLING DRUG Bayer aspirin	35
	J.C. PENNEY	45
WON	PEP BOYS Auto repair	50
	LECHTER'S Housewares	5
Total U.S. billings	1990: $892 MILLION 1993: $781 MILLION	

DWORIN, 40, THE FIRST AYER BOSS HIRED FROM OUTSIDE, MUST CHANGE A PERCEPTION THAT THE OLDEST U.S. AD SHOP HAS LOST ITS WAY

rity stakes in Ayer's European agen-
es. He also tried to merge Ayer with a
ttsburgh agency, Ketchum Communica-
ons Inc. Then, Humphreys agreed to
y a controlling stake with partners
at include Choi Won Young, a South
orean publisher whose family controls
e of Korea's largest conglomerates,
ong-Ah Construction Industrial Co.
umphreys won't say how much the
oup has invested, but he doesn't quib-
e with outsiders who value Ayer at
ughly $80 million. That would put his
% stake at $48 million.

With the cash infusion, Ayer no long-
needed a partner to remain financial-
viable. Yet Siano continued looking
r a merger to boost his agency's flag-
ng creative profile. He came close to a
al with San Francisco agency Hal Ri-
y & Partners, but the talks foundered
veral weeks ago. Now, Humphreys
ys he is concentrating on buying back
e stakes in Ayer's European agencies.
e may also use an agency owned by
noi in Seoul as a base to build Ayer's
esence in Korea.

EERLEADER. Even though Humphreys
s no operating title at Ayer and will
on name Dworin chairman as well as
O, he plans to supervise Ayer's over-
as holdings himself. His goal is to free
worin to focus on the U. S. operation,
hich generates 83% of Ayer's billings.
siders say Dworin may name his own
anagement team. But he insists Ay-
's managers are talented: They just
ed a morale boost.

Reviving Ayer will take more than
eerleading, though. Some marketers
y the agency must rethink its place in
e industry. They say Ayer is too big
compete with creative shops such as
eutsch but too small to match the
erseas presence of an Ogilvy & Math-
Inc. "If they want to compete with
e Ogilvys of the world, they're going
have to link into a global network,"
ys Robert Thompson, director of ad-
rtising services at AT&T.

Yet Dworin seems to be heading in
e opposite direction. At Deutsch, he
rived by spiriting accounts away from
gger rivals. So not surprisingly, Dwor-
wants to instill a small-agency sen-
bility at Ayer. That means he'll im-
erse himself in the nitty-gritty of
yer's work for everyone from GM to
to-repair chain Pep Boys.

But can Dworin square his small-agen-
style with the need to rebuild Ayer's
g-agency capabilities? AT&T says it will
end more and more marketing dollars
erseas. Even as he rallies the troops
home, Dworin must satisfy clients
ho are looking abroad. Clearly, the de-
ands on advertising's most wanted
an have only just started.

By Mark Landler in New York

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WHY ARE WE SO AFRAID OF GROWTH?

CONVENTIONAL WISDOM DOESN'T HOLD ANYMORE

Can't we do better than this?

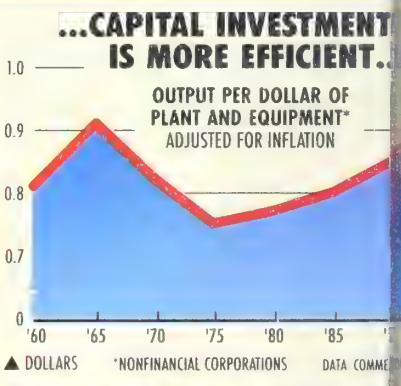
Ever since the U. S. economy powered ahead at a torrid pace late last year, the financial markets have feared that accelerating growth would send prices spiraling. To beat inflation to the punch by cooling off the economy, the Federal Reserve Board has already raised short-term rates in three quarter-point installments since early February. And Wall Street expects more rate hikes to come, even though the economy expanded at only a 2.6% clip in this year's first quarter.

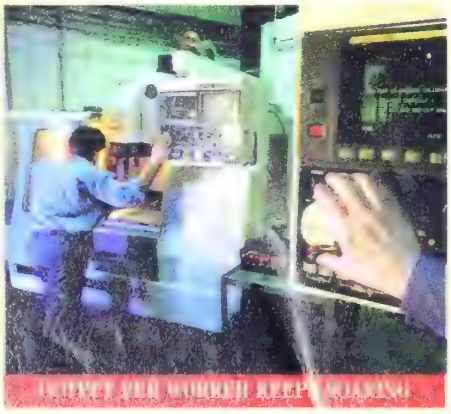
It's beginning to look as though any surge in growth will be squashed in the interests of keeping the inflation nemesis under control. Most forecasters assume that economywide productivity growth will average some 1% a year. Add to that labor force growth of 1.3% or less, and the long-term growth potential of the economy comes to between 2.0% and 2.5% a year. Any pace faster than that, and the economy rushes headlong into production bottlenecks that ignite a wage-and-price spiral.

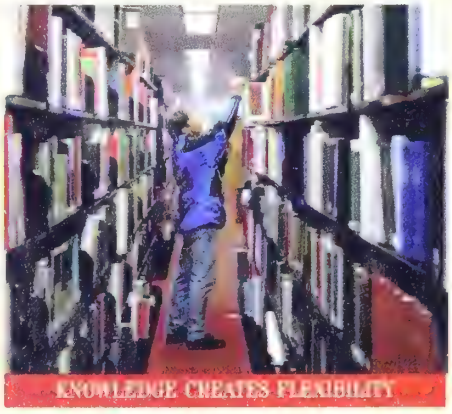
Certainly, the Clinton Administration "is comfortable with 2.5% as our long-run forecast," says Laura D'Andrea Tyson, chair of the President's Council of Economic Advisers. And Robert T. Parry, president of the Federal Reserve Bank of San Francisco, recently told a gathering of forecasters that "for the last two years, the rate of growth has been faster than the economy can sustain in the long run." No wonder every bit of good economic news gives the financial markets the jitters—sending bond and stock prices tumbling.

But the fears of the forecasters and the markets may be unfounded. "People

WHY STRONG ECONOMIC GROWTH WON'T CAUSE FASTER INFLATION






KNOWLEDGE CREATES FLEXIBILITY

COMPUTER PRICES ARE STEADILY DRO

e taking the last 15 years and just ojecting them forward," says Rich-d Nelson, economist at Columbia Uni-rsity. The conventional outlook under-timates Corporate America's huge oductivity gains, a historic wave of chnological innovation, and the spread capitalism around the world. "Pro-ctivity has dramatically improved mpared with the prior two decades," ys Bruce Steinberg, economist at errill Lynch & Co. "And improved oductivity means the economy can ow more rapidly without triggering flation."

ILL STINGY. True, the recent pickup in anufacturing activity is raising the ector of production bottlenecks. Yet in increasingly global economy, many nerican companies can shift excess der flows to factories overseas. And th nearly one-fifth of all goods bought the U. S. produced overseas, foreign mpetitors are eager to expand their les should stateside companies ag-essively raise prices. White-hot inter-tional competition puts a damper on e ability of U. S. companies to jack up ices.

Fed Chairman Alan Greenspan rees that the growth prospects of e U. S. economy have improved. He believes the economy's underlying growth trend of productivity in both manufacturing and services has recently risen to 1.5% and that the noninflationary growth potential of the U. S. is certainly higher than the modest pace projected by conventional wisdom. "U. S. businesses in recent years have been investing in new capital and improving their use of capital in ways that are making the U. S. economy more productive," Greenspan recently wrote.

Still, the Fed isn't joining in any victory dance—at least not yet. Instead, it has been pursuing a tightfisted monetary policy as part of a campaign to convince the markets that it won't let inflation erupt.

And the markets, it seems, need a lot of convincing. They were seared by megabuck losses during the 1970s price spiral and won't risk trillions more until they have positive proof that higher productivity growth rates are here to stay and inflation will remain dormant. For example, consumer price increases are running at a 2.6% annual rate and investors are demanding a yield of more than 7% on 10-year Treasury bonds. By contrast, when inflation was this low back in the mid-1960s, investors only required a yield of 5%.

> FAR FROM BEING A MATURE ECONOMY, THE U.S. IS ONE IN THE THROES OF A HISTORIC TRANSFORMATION

How good can growth get before the economy overheats? Perhaps a lot better than most people think. Over the past three years, productivity has been rising far faster than the rate assumed by the typical forecast—a 2.6% average annual rate, similar to the experience of the 1950s and 1960s.

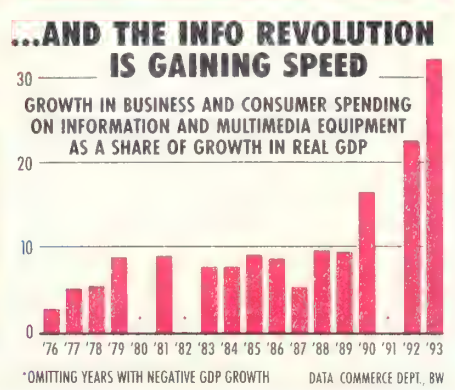
In part, this reflects the typical productivity rebound that follows a recession. But with business equipment investment hitting 9% of gross domestic product, its highest level in the postwar period, the productivity surge is likely to continue. Tack on labor-force growth, and that means the economy's noninflationary growth potential could be as high as 3.5%—and not for two quarters

The U.S. economy has expanded at a 2.4% annual rate since 1980. Most forecasters figure that the economy's growth potential is 2.5% at best. But the evidence is mounting that it could be as high as 3.5% without touching off inflation. Here's why:

DUCTION CAN BE MOVED OFFSHORE

THE U.S. HOLDS THE DIGITAL EDGE

CONSUMERS ARE SITTING PRETTY



ILL TO PI PHOTOGRAPHS BY SCOTT GOLDSMITH; DAVID H. TWOMEY • STAFF ... GAMMA-LIAISON; JEFF ALLOBSON; ANN STATES; SARA ... GAMMA-LIAISON; JEFF ALLOBSON; ANN STATES; SARA ... CHART BY USA • NOUSE BRAHMAN BW

or a year, but perhaps for the rest of the decade.

The gap between a growth rate of 3.5% and 2.5% may not seem like much, but it's the difference between eating fish eggs and caviar. The higher growth rate would cumulatively add about $1.2 trillion more, in 1987 dollars, to the nation's output by the year 2000. It would increase total business investment over the next six years by $170 billion. Per-capita income would rise to $23,600 instead of $22,250. The federal budget deficit would shrivel, and the U. S. could afford to spend plenty more on education, training, and scientific research, the seed-corn of future growth. Strong growth creates a powerful, self-reinforcing dynamic all its own.

JOSEPH A. SCHUMPETER

"But in capitalist reality, as distinguished from its textbook picture, it is not (price) competition which counts but the competition from a new commodity, the new technology, the new source of supply, the new type of organization..."

STUNNING PACE. Of course, many economists remain convinced that America can't grow faster because it's a mature economy. The U. S., they say, has lost its economic and technological leadership in field after field to Asian and European rivals. To survive, companies are slashing costs by eliminating workers even entering the fourth year of recovery. The cold war's end, with the resultant cutbacks in the defense industry, is dampening growth, too. "Everyone hopes the rate of technical progress can pick up and the rate of productivity growth will pick up," says Gary Burtless, economist at the Brookings Institution. "But there is little basis for optimism."

But is the U. S. really stuck in mediocrity? "Economies have a way of defying expectations," says Alan Brinkley, a professor of history at Columbia University. For example, economists expected anemic growth in the U. S. in the wake of World War II. But for the following generation, the economy grew at a stunning pace. How about the limits-to-growth panic of the 1970s? Oil, food, and other commodities once feared in short supply are now in cheap abundance. Says Robert Eisner, economist at Northwestern University: "Economists look at what has been happening and say that must be natural. Growth has been slow so it must stay slow."

What the slow-growth forecasters fail to appreciate is that the U. S. is in the throes of a transformation. Underlying the recent acceleration in productivity is a gathering web of technological and commercial innovations revolutionizing the economy, much as steam power did in the late 1700s and electricity did in the late 1800s.

The Industrial Era is giving way to the Information Age. "We are living

ECONOMISTS FOR AN EXPANDING UNIVERSE

These days, a growing school of economists are asking what propels growth and drawing inspiration from the ideas of Joseph A. Schumpeter (1883-1950), the Austrian economist and Harvard University professor. Like Schumpeter, these economists are focusing on technology, innovation, and knowledge. And the underlying message of the Schumpeterians is fundamentally optimistic. "The one fact that comes from economic history is the ability of the human mind to break through barriers that weren't imaginable 50 years ago," says Joel Mokyr, economic historian at Northwestern University.

Traditionally, mainstream economics has been unable to explain what determines long-term growth. In the late 1950s, Nobel laureate Robert M. Solow of Massachusetts Institute of Technology showed that increases in the economy's labor supply and capital stock explained only part of growth. The rest was attributed to technological change, but it was largely unexplainable.

The Schumpeterians go beyond traditional economics to look at what really drives technological change. They are analyzing how growth is affected by the support for technical innovation, educational institutions, and rewards to entrepreneurs for coming with new products. A leading Schumpeterian is Paul Romer of the University of California at Berkeley, perhaps one of the country's most influential young economist. Romer's theoretical work has broken new ground by showing how technological progress can supercharge growth just as a new jet turbine or a new technology drug spells the difference between a plodding economy and a dynamic one. Romer and other new growth theorists are finding support from

GENE GROSSMAN

By applying Schumpeter to growth theory, the Princeton economist is studying how industrial research invigorates growth

PAUL ROMER

The possibilities for new growth and technologies is unlimited. "We systematically underappreciate the potential for new things to happen"

ough one of these fundamental and found changes in the economic para- m built around the transmission, re- val, and analysis of data and fall- transport and communication costs," s Richard Lipsey, an economist and ow at the Canadian Institute for Ad- ced Research.

And the Information Revolution is part of a much bigger innovation ve. U. S. patent applications have ged by a remarkable 35% over the t six years. The financial services in- try keeps churning out new prod- s tailored to meet the needs of a glo- economy. Pioneers in biotechnology multimedia are building whole new ustries. Old-line companies like Gener- Electric, AT&T, and Alcoa are shedding eaucracies and rigid hierarchies to er responsiveness and creativity. "In- ation is the mother of all core pro- ses, encompassing all levels and func- ns of a corporation," says Richard ter, director at McKinsey & Co. "And S. companies are collectively the most ovative in the world."

OWTH GURU. Conventional economics s short in dealing with the impact of n momentous upheavals. The kind of dels that predict a 2.5% limit to non- ationary growth describe a world ere the economy plods ahead at a e determined by the amount of capi- and labor employed, while fiscal and netary policies are geared toward ping the economy's fluctuations with- fairly narrow band. Of course, con- tional models do an excellent job of cribing how interest rates affect home buying or how higher taxes crimp consumer spending. But they are almost mute when it comes to measuring how new technologies affect growth.

To better grasp the relationship between innovation and growth calls for turning to an economic tradition championed by the late Joseph Schumpeter, one of the 20th century's intellectual giants. Schumpeter developed the idea of creative destruction, the process by which new technologies, new markets, and new organizations supplant the old. "Except for Karl Marx, Schumpeter was the only economist who placed strong emphasis on innovation and technological change as sources of economic growth," says Frederic M. Scherer, economist at Harvard University.

In recent years, Schumpeter has become a leading light to a group of economists struggling to answer the most basic question in economics: What drives growth? Like Schumpeter before them, these economists argue that innovation is the essence of capitalism. Knowledge and its application to real business problems count for more than capital and labor, the traditional factors of production. Entrepreneurs, industrial research, and knowledge are what matters (box).

The U. S. is not an aging, mature economy to the Schumpeterians, but rather it can generate almost unlimited possibilities of new goods and new technologies. "Knowledge doesn't face diminishing returns. It's an expanding universe," says Richard Baldwin, economist at the Graduate Institute of International Studies in Geneva. Adds Paul Romer, economist at the University of California, Berkeley: "We systematically underappreciate the potential for new things to happen."

DISINFLATION IS FAST BECOMING THE NORM IN THE ONCE INFLATION-PRONE AMERICAN ECONOMY

It's easy to lose sight of the importance of innovation on growth because it doesn't have a straight-line impact. Picture this: a chart with an S-shaped curve. When a new technology is introduced into a company, productivity actually falls as workers and managers struggle to master different techniques and skills. But as more and more people move up the learning curve, the new technology begins to pay dividends, and productivity surges ahead. And sometimes innovations come in clusters, such as now with computers, communications, and other high-tech information systems. When that happens, the S-curve effect is magnified as each advancing technology feeds off the other.

History offers striking examples of the S-curve effect. Take electricity. Many of the critical advances came in the 1870s and 1880s. But it wasn't until

c historians as Paul David of University. His empirical studies e historic interplay between tech- l change and economic growth. most recent wave of research e Schumpeterians focuses on the tween international trade and In traditional economic theory, efits from free trade to a large such as the U. S. come mainly consumers and businesses can er prices for imports. While this all potatoes, it doesn't do much ase growth in the long run. ree trade may have a much big- off than conventional economics Free trade encourages the rapid spread of technology and industrial ideas, according to such trade theorists as Gene M. Grossman of Princeton, and Elhanen Helpman of Tel-Aviv University, who have been influenced by the pioneering work of Paul R. Krugman of MIT. Trade can also invigorate growth by providing access to bigger markets. Conversely, in many cases, barriers to trade slow the rate of technological transmission, leaving a protectionist country lagging far behind.

JOEL MOKYR

One lesson of economic history "is the ability of the mind to break through barriers that weren't imaginable 50 years ago"

Take the developing countries of Latin America and the former East bloc nations. They learned the hard way that erecting trade barriers to protect domestic industries isolated them from global technological progress and helped condemn them to years of stagnation. And without fierce competitive pressure from the Japanese auto companies, it's doubtful U. S. carmakers would have felt compelled to engineer productivity gains of 10% a year in the 1980s.

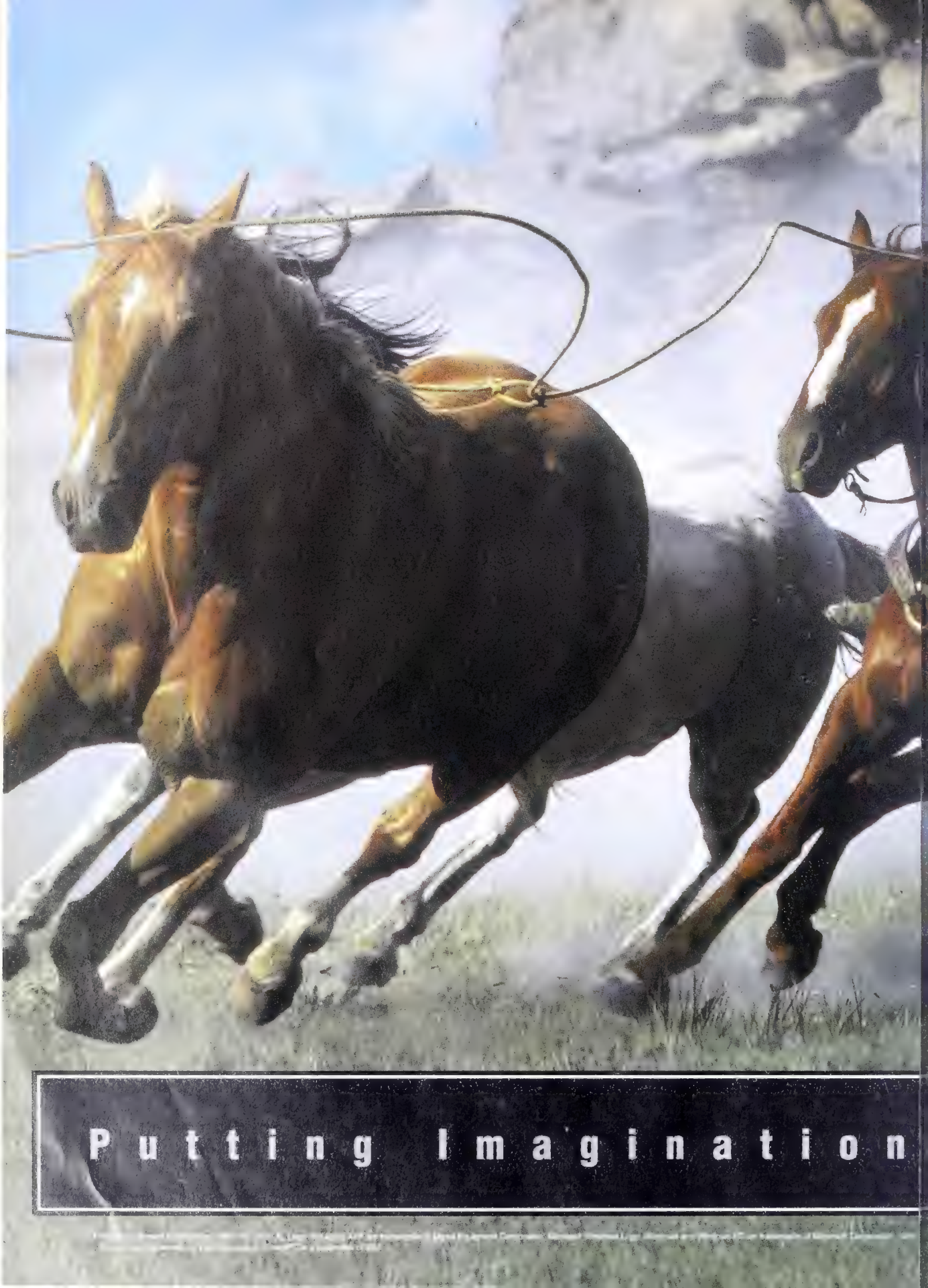
PAUL KRUGMAN

The lay view of international trade as a conflict, with winners and losers, is deeply wrongheaded, the MIT economist believes

Beyond trade, the theory has far-ranging implications for economic policy. Governments, business, and universities have a key part to play in affecting the pace of innovation. Some Schumpeterians would like to see stronger government support of commercial technology, especially in the service sector, and others more industry collaboration to develop world-class products. "To achieve long-run success, economic policy must support the institutions that generate ideas and technological progress," says Romer.

By Christopher Farrell in New York

[RIGHT] PHOTOGRAPH BY DIANE SCHMIDT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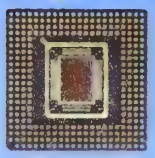

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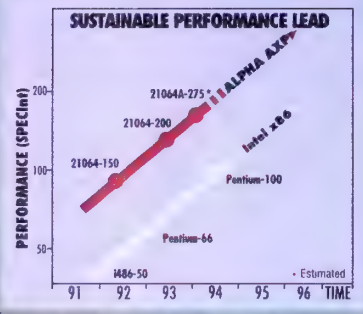

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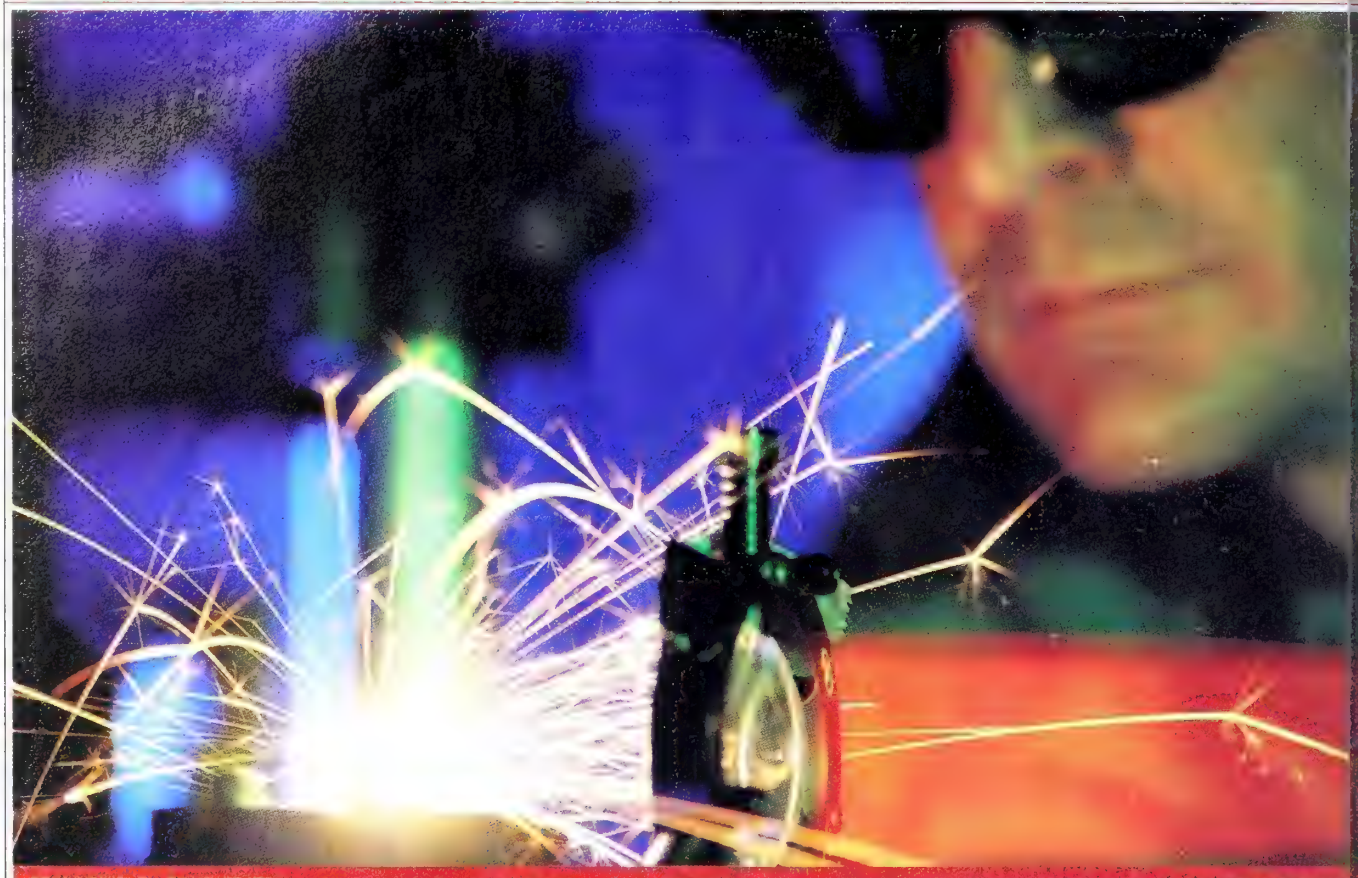

SPARKING GROWTH INNOVATIONS TODAY ARE COMING IN CLUSTERS—COMPUTERS, COMMUNICATIONS, AND INFORMATION SYSTE

two to three decades later that the productivity-enhancing promise of electrification was realized. Overall, U. S. productivity jumped to a 2.4% annual rate in the early 1900s vs. a 1.3% pace in the late 1800s, according to Paul David, economic historian at Stanford University.

EVOLUTIONARY CLIMB. Similarly, after a long lag, information technologies are just now living up to their economic promise. Says W. Daniel Hillis, cofounder of Thinking Machines Corp., a Cambridge (Mass.) maker of massively-parallel-processing supercomputers: "Society has to adapt around new technologies. That takes longer than developing the technologies themselves. The good news for the economy is we have a lot of stuff in the pipeline that will start paying off."

It's about time. For the past decade or more, the gale winds of "destruction" have been all too painful and apparent. Battered by vicious competition at home and abroad, companies have substituted information technologies for labor, eliminating millions of jobs. Corporate layoff announcements in the first quarter were up 11% from the same period last year, according to Challenger, Gray & Christmas Inc., an international outplacement firm. Delta Air Lines Inc. has just announced plans to eliminate 15,000 jobs in a mammoth restructuring, and overall unemployment levels are disturbingly high. The lethal combination of technological change and increased competition has slashed the real wages of low-skill and less educated workers, too.

Now, the signs of the payoff are finally here: Companies are becoming much more efficient. Anheuser-Busch Cos., the world's largest brewer, is replacing packaging equipment installed some 15 to 20 years ago with newer technology that requires fewer workers. Without adding any more workers, Mead Data Central, a leading electronic supplier of databases, is providing access to a lot more data. "We added 100 billion characters in 1993, and we'll probably add 250 billion characters this year," says Rodney L. Everhart, president of Mead Data.

Indeed, the rate of return on telecommunications investment is around 30%, including indirect benefits to the economy, says Francis Cronin, managing director at DRI/McGraw-Hill. And a recent study by Frank R. Lichtenberg, economist at Columbia University School of Business, found that one information systems worker can replace six othe employees without affecting output.

Savvy companies are also discove ing that breaking down the century-o command-and-control bureaucracies ha an impact on innovation. For exampl Toledo-based Dana Corp., a $5.5 billio producer of automotive and other indu trial products, actively solicits ideas fro employees at its 197 manufacturin plants scattered all over the world. "Th power of that is incredible," says Sout wood J. "Woody" Morcott, Dana's chi executive.

"QUITE ISOLATIONIST." Stitching togeth er teams from engineering, design, f nance, marketing, and production als seems to be boosting research and d velopment productivity. As Rockwe International Corp. has shifted more its R&D from long lead-time defens work to the fast-paced commercial ma ket, it is tying its scientists to tea within the organization, according Robert L. Cattoi, senior vice-presider at Rockwell. Says John Seely Brow head of the Xerox Corp.'s Palo Alt Research Center, better known as PAR "We've moved from being quite isol tionist to having a rich set of convers tions with all parts of the compan [Yet now] we're probably bringing ou

-BEHEMOTH NEARLY NONEXISTENT TWO DECADES AGO, THE BIOTECH INDUSTRY NOW BOASTS ALMOST 700 ACTIVE COMPANIES

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measures are inadequate, says Zvi Griliches, economist at Harvard University. For example, more and more supermarkets have installed bar code readers in their checkout lines, making them faster and more accurate. Yet these gains to consumers do not show up in the government's numbers. With prices falling so fast in the high-tech market and quality improving so rapidly, the beancounters make mush of the productivity numbers.

> IN THE HIGH-TECH MARKET, FALLING PRICES AND SOARING QUALITY ARE MAKING MUSH OF THE PRODUCTIVITY NUMBERS

What is clear, however, is that since it takes less money to buy better products, the productivity of capital is enhanced. For instance, computer users are accustomed to increasing their processing power by a factor of 10 every five to seven years at no additional cost. Overall, prices of computers and telecommunications equipment have plunged by 23% over the past five years. The government statisticians say that technological improvements and quality adjustments suggest that the consumer price index is overstated by some 0.5 percentage point—which would put it at a 2.1% annual rate instead of the posted 2.6%.

The forces holding inflation in check are also powerful. Labor costs are well under control and wage pressures almost completely absent. Unions have been sidelined, too. The number of workers covered by cost-of-living adjustments in major collective bargaining agreements is now lower than at any time in the past quarter century—from a high of 61% in 1976 to a low of 24% in 1993. The three-week strike by 75,000 Teamsters barely disrupted the economy in April. By contrast, when the Teamsters last struck, in 1979, the 10-day work stoppage caused widespread production disruptions.

GLASS CUSHIONS. The old rules of thumb about capacity utilization constraints and inflation flashpoints may no longer work, either. A lot of U.S. companies have plenty of manufacturing capacity abroad. When order flows substantially increase, companies can shift production runs to plants in Mexico, Canada, Asia, and other regions. Take Owens-Illinois Inc., the Toledo-based king of glass containers. Owens is running its glass plants at capacity, and

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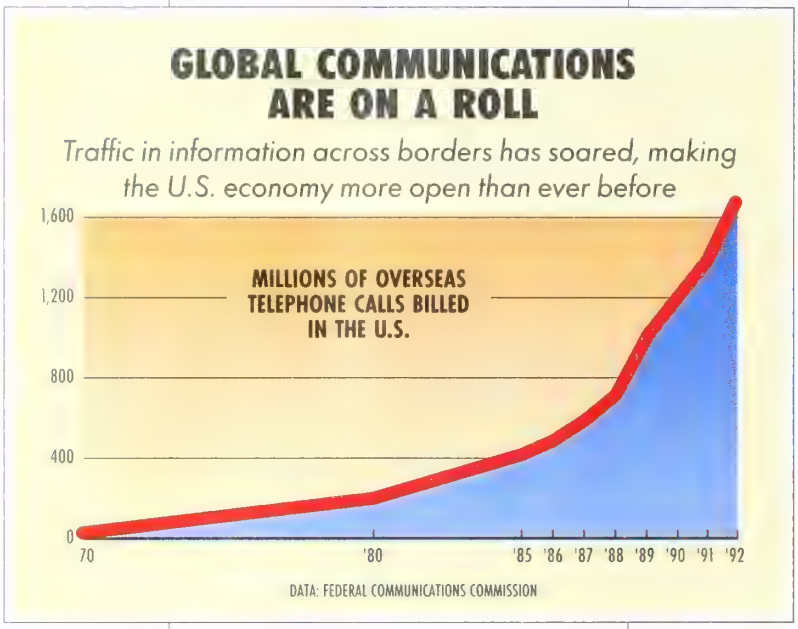
the company is bringing in product from operations in Venezuela and elsewhere. Strong capital goods spending is quickly adding to the capital stock and raising capacity levels. Companies are increasingly adroit at boosting productivity and raising capacity, too. "It seems we get more creative each month," says Donald P. Hilty, chief economist at Chrysler Corp.

Even in those parts of the economy where prices are up, they aren't spiraling. Look at steel. Steel service centers, which purchase and distribute nearly 45% of all U. S.-made stainless steel, are shipping record volumes, and raw-steel producer plants are running near capacity. Over the past year, prices of flat-rolled steel have gone up from $310 a ton to $355, and scrap metal prices from an average of $97 to $147 per ton. But prices are leveling off with excess supply available from overseas makers. The price of scrap, used in minimills, has started to decline. When U. S. scrap prices surged, European buyers turned to cheaper Russian pig iron. "I don't think prices are going to go a lot higher," says F. Kenneth Iverson, chairman and CEO of Nucor Corp.

Disinflation is fast becoming the norm in the once inflation-prone U. S. economy. Producer prices are rising at only a 0.2% annual rate, and even medical-care inflation has dropped from an annual rate of more than 9% in 1990 to less than 5% currently. Economists often underestimate how long price trends can last, too. Over long stretches in history, inflation has been well-behaved. For instance, between 1860 and 1916, the annual rate of increase in the consumer price index was 0.3%, and it was 2.8% between 1960 and 1970. Says Stephen S. Roach, economist at Morgan Stanley & Co.: "With intense competitive pressures offering industry little alternative, there is good reason to believe that the fundamental break between the cost curve of the 1990s and those of the past will persist."

Higher U. S. productivity and technological innovation is a big competitive advantage in overseas markets too. Sure, the U. S still runs a merchandise trade deficit of some $130 billion a year, and worries about international competitiveness run deep. Japan and Europe are devoting huge private and public resources to nurturing science and technology. And the fast-growing economies of East Asia and Latin America are encouraging foreign multinational investment as a way of transferring manufacturing and management knowhow.



ALTERED POSITIONS. Nonetheless, U. S. companies are globally competitive in many leading-edge industries. The biotechnology industry, for example, was nearly nonexistent two decades ago and now has almost 700 active companies. The foundations of the Information Superhighway are being laid, despite the breakup of the mega-merger between Tele-Communications and Bell Atlantic. China's Guangdong province may be growing at 15% a year, but the Internet is expanding by 15% a month. Competitive high-tech goods are a key reason why U. S. export growth has averaged more than 9% a year over the past seven years—more than three times the gains of Japan and Germany. "And as consumers tap into the Information Highway, the competitive position of nations and industries may be further altered," says Steinberg of Merrill Lynch.

> AMERICA IS THE ONLY INDUSTRIALIZED COUNTRY TO HAVE DEREGULATED AIRLINES, TELECOM, AND TRUCKING

Indeed, in the U. S. there are fewer impediments to "creative destruction" than elsewhere. Regulatory burdens are fewer and market competition more intense. America is the only industrial country to have deregulated its airlines, financial services, telecommunications, trucking, and other industries. For instance, largely reflecting the competitive forces unleashed by deregulation, a blended measure of labor and capital productivity shows the U. S. telecommunications industry is as much as twice as productive as its counterparts in the major European countries, according to an analysis by McKinsey & Co. "What's important is that competition energizes new ways of doing things," says Donald McCloskey, economist at the University of Iowa.

Labor is highly flexible, too. And the nation's borders are more open. Research, development, and technological innovation are skills that are forged in the crucible of international competition. Most important, though, is America's entrepreneurial tradition. From Andrew Carnegie to Bill Gates, the incandescent lightbulb to spreadsheets, the U. S. has long been open to the ideas of innovators, mavericks, and immigrants. And these entrepreneurs have generated tremendous bursts of growth in the past. "What is our comparative advantage?" asks Zoltan Acs, economist at the University of Baltimore. "It is our ability to innovate."

Clearly, the U. S. economy is emerging stronger than it has been after two decades of turmoil. The nation is more productive and more competitive than at any point since the early 1960s. The biggest threat to the wellsprings of faster growth comes from the troubling combination of zealous restraint by policymakers and the inflation jitters of bond market investors. Both threaten to squander the economy's potential strength and all the jobs and wealth it would produce.

The U. S. can do better—but not if it continues to fear growth.

By Christopher Farrell, with Michael Mandel in New York, and bureau reports

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STRATEGIES

A DESTINATION, BUT NO FLIGHT PLAN

Delta's latest turnaround program sets drastic goals, but . . .

Immediately after the board of Delta Air Lines Inc. approved a $2 billion cost-cutting plan on Apr. 28, CEO Ronald W. Allen held a slide show at headquarters for the pilots' union that summed up the line's problems. Click. $1.2 billion in losses in the past three years. Click. Trouble from low-cost carriers, such as Southwest Airlines Co. Click. The debacle in Delta's European system. Then Allen turned the meeting over to subordinates. "Our first proposal is a white sheet," Operations Vice-President Harry C. Alger told the union. "We've set a cost-reduction goal, and everything else is open for negotiation."

That pretty much sums up Delta's grand turnaround plan. To transform the $12 billion Atlanta-based airline into a low-cost carrier and pull it out of the red, Allen has declared all-out war on costs. He wants to slash everything from marketing expenses to fuel costs. And he intends to eliminate 15,000 jobs, or 20% of Delta's workforce, by 1997. But while Allen, 52, has set goals, the details of implementation are something of a blank. Delta's chief may not know until after Labor Day just how he aims to go about meeting his targets.

A SCRAMBLE. Small wonder some rivals are questioning whether Delta's goals are realistic. "If you're not going to begin the process of reengineering until sometime in the future, how do you know how much you're going to save?" asks a skeptical Robert R. Ferguson III, CEO of Continental Airlines Inc. Others suggest Allen's plans may not go far enough. Virtually every airline—large and small—is scrambling to cut costs. And the benchmark for what defines a low-cost carrier is heading constantly lower. "They have a very big problem in attempting to come after us. They don't fully appreciate our cost level," warns ValuJet President Lewis Jordan. One example: ValuJet's captains earn an average of $42,000 a year, compared with $140,000 at Delta.

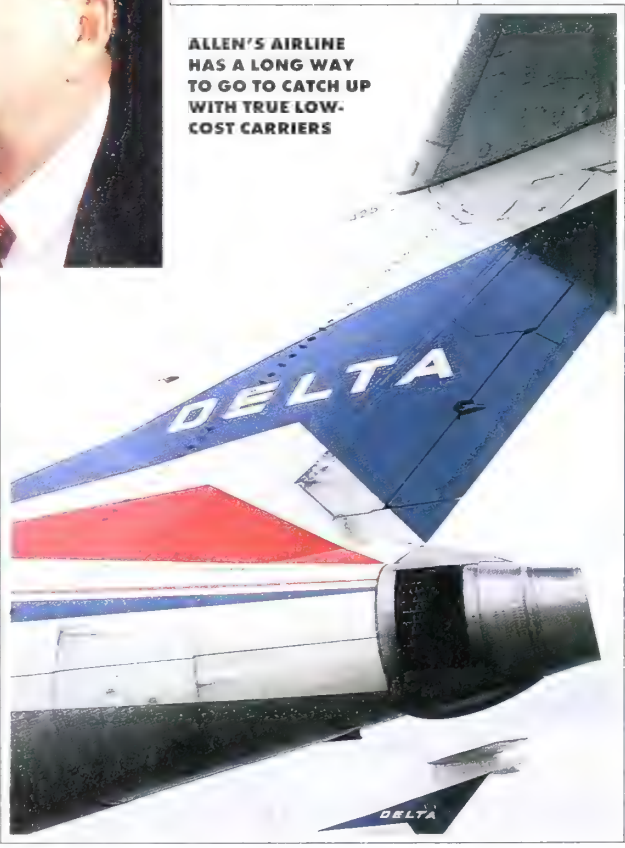
Delta's previous overhauls do little to soothe the skepticism. The carrier has already navigated through a flurry of cost-cutting efforts. Just last year, Allen cut wages and benefits and laid off 550 employees. On top of that, Delta cut its aircraft purchases by $7.3 billion. But now that the dust has settled, Delta is still listing badly. Analyst Julius Maldutis of Salomon Brothers Inc. estimates that Delta will spill more red ink this year. Losses could narrow to $146 million in the fiscal year ending Aug. 3 from $415 million last year.

Chronically high costs, especially hug wage and benefit packages, have a lot t do with Delta's sorry performance. Eve after recent expense reductions, Delt still spends 9.76¢ per mile for each of it available seats. That's a far cry fro Southwest's 7.2¢. Only troubled USAi Group Inc. costs more to operate tha Delta, at 11.35¢ per seat, according t consultant Avitas Inc. "It's still nc enough," Allen says of recent restruc turings. "We've got to do more."

DEADLINES. This time around, Alle wants to be far more aggressive on cost His goal: to lower seat costs to 8.6¢ mile by June, 1995, and ultimately 7.5¢ b 1997. Allen has targeted 11 areas wher he believes he can squeeze out cost One big advantage: only Delta's pilot and dispatchers are unionized, so Alle can easily make some work-rule change Top managers will spend the next fe months working out the specifics, thoug details on who will be laid off are du July 15. The deadline for spelling ou cuts in services is Sept. 15. "The un known bothers a lot of people," says A len. But Delta's boss says he wants to re main flexible during such a sweepin top-to-bottom review.

As for its pilots, Delta will likely pres for work-rule changes to allow for mor flexible scheduling. contract talks get ugl this summer, Allen vow to replace some domest routes by signing join venture deals with smal er airlines. "We hope doesn't go in that dire tion," he told the pilot on Apr. 28. Their rea tion to Allen's hard line "We're in the beginnin stage of a negotiatio and that's how negoti tions work," says Cam ron Foster, a negotiatin committee membe Some competitors spe ulate that Delta ma have to swap equit with the pilots, as Uni ed and Northwest hav in return for concession

Elsewhere, Allen say he wants to shorte turnaround time fo flights by creating "co tinuous hubs," meanin traffic will constantl flow in and out, rathe than gushing and trick ling during the day a



ALLEN'S AIRLINE HAS A LONG WAY TO GO TO CATCH UP WITH TRUE LOW-COST CARRIERS

ta's traffic now does. en says Delta is even loring a joint venture n an undisclosed infor- ion processing compa- to handle back-office rations.

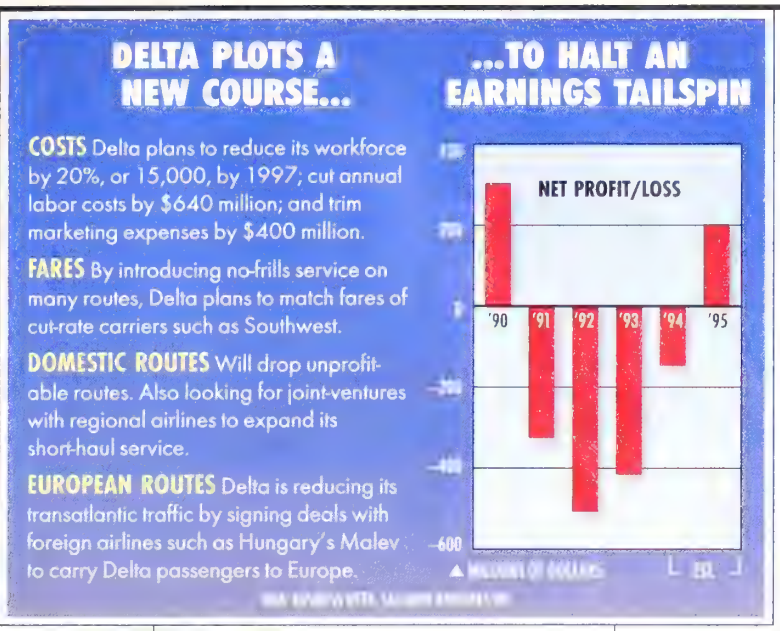
n contrast to its do- stic overhaul, Delta is king headway revamp- its money-losing Euro- n routes. Delta paid a y $1.4 billion for Pan erican's planes and ter- als in 1991 to secure European routes. But Am's operations were ismal shape. Then the opean recession killed fic. But over the past r, the carrier has nped some unprofitable tes, while signing up tners, such as Malev Hungarian Air- s and Austrian Airlines, to ferry Del- assengers to European cities.

GAMBLE. Just as important, Delta hed a deal in April with Virgin Atlan- Airlines Ltd. to gain access to Lon- 's Heathrow Airport, a critical Euro- n hub. Delta will pay $150 million to ure seats on Virgin for Delta passen- s and has promised to lend flight attendants to the British airline. Some analysts question whether the partnership will work. Delta's style contrasts sharply with the unorthodox Virgin, which hopes to introduce in-flight video gambling later this year. But Virgin founder Richard Branson sees few problems: "I think opposites can work quite well together."

Shareholders seem willing to give Allen's latest plan a chance. After falling almost 20% this year, Delta's stock has climbed about 4% since the Apr. 28 announcement, to 47¾. "They're saying not, 'how can we survive to compete another day?' but, 'how can we win?'" says Mike Magiera, a member of the investment committee at Manning & Napier Advisors Inc., one of Delta's big shareholders.

Those who wonder about Delta's capacity for a turnaround would be advised to ponder the lonely lettuce leaf. During an employee suggestion program in 1992, a menu-development worker proposed removing the lettuce leaf Delta used as a bed for its fruit salads. The leaf was a waste, she reasoned, because few travelers ate it. The savings? $1.4 million. Leaf by leaf, over the next three years, Delta will have to find some real cabbage to cut. Or else: Click. Lots more turbulence ahead.

By David Greising in Atlanta, with Paula Dwyer in London and Wendy Zellner in Dallas



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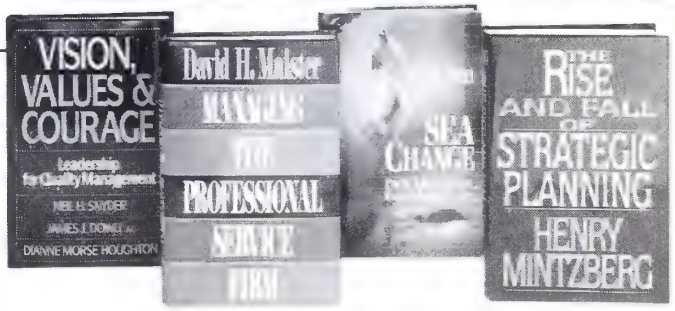

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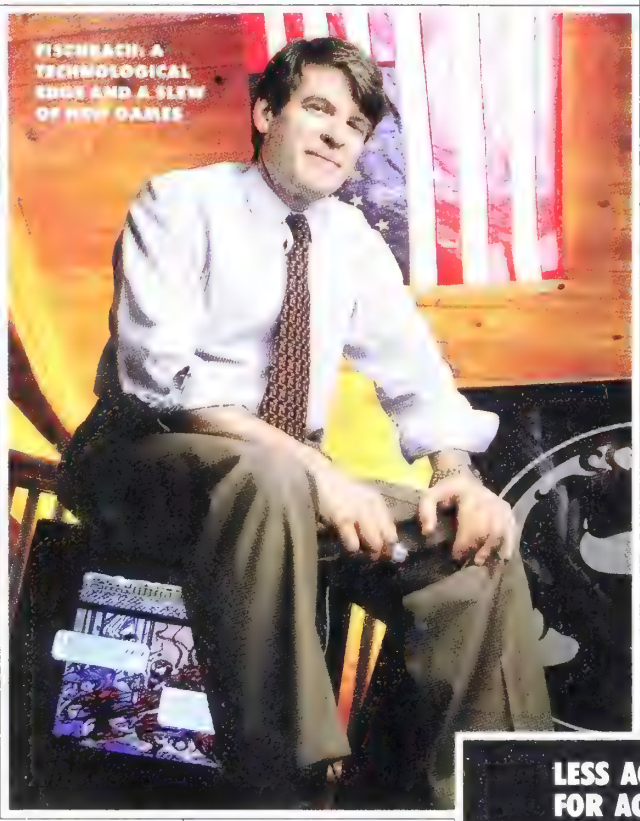
STRATEGIES

IS THERE LIFE AFTER *MORTAL KOMBAT*?

Game maker Acclaim must overcome the loss of a key contract

At some points in the controversial video game *Mortal Kombat*, a fighter rips out the hearts of his victims. That image might seem unpleasantly familiar right now to Gregory E. Fischbach. The chairman and chief executive of Acclaim Entertainment Inc. recently learned that the video-game publisher would lose its licensing contract with WMS Industries Inc. For Acclaim, it wasn't as lethal as what happens in *Mortal Kombat*, but it was painful. WMS created *Mortal Kombat* and *NBA Jam*, Acclaim's two top hits—and its games, by some estimates, produce 75% of Acclaim's revenues.



The blow came on Mar. 30, when Nintendo of America Inc. said it had reached an exclusive agreement with WMS to form a joint venture to sell games for Nintendo's Project Reality system. That made it clear that WMS was jilting Acclaim, which converted some WMS video-arcade games into home versions for Nintendo and Sega Enterprises Ltd. systems. The relationship began to unravel when WMS demanded $8 per cartridge in licensing fees; Acclaim had been paying about $1. In response, Acclaim's stock tumbled 50% in two weeks, to 13¾.

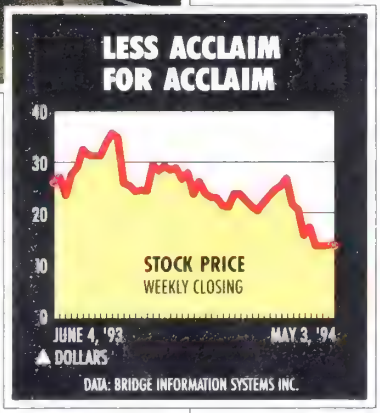
3-D IMAGES. Fischbach calls the sell-off "an overreaction" and argues that losing the WMS contract is hardly fatal. He says the four-year relationship generated only two megahits, and he believes Acclaim, the largest independent video-game maker, can surpass that record on its own. Fischbach, an entertainment lawyer and former president of RCA Records International who co-founded Acclaim in 1987, vows to release a slew of top-selling games in the months ahead. Acclaim recently purchased rights to develop games based on three new movies, including Arnold Schwarzenegger's *True Lies*. And it spent $65 million to acquire Voyager Communications Inc., the No. 3 comic-book publisher and home to characters that might find new lives in games.

Fischbach also says Acclaim's technology should give it an edge as video-game formats keep shifting. In April, the Oyster Bay (N.Y.) company signed a deal with Sega to become the first U.S. software publisher to make games for its Genesis Super 32X machine. Meanwhile, Acclaim plans to unveil a new line of games in 1995 using a technology called "motion capture" that could revolutionize the video-game business by producing three-dimensional imaging and graphics.

Still, Acclaim must prove it can make a megahit video without WMS. "Their product development has never been spectacular," says Joseph Morici, senior vice-president at CapCom USA Inc., a leading rival. That's a big reason investors remain wary. "We look for consistent and demonstrated profitability in a company," says Rodney L. Linafelter, a portfolio manager at Berger Associates Inc. in Denver, which recently sold its remaining 500,000 shares in Acclaim. "And we were not as comfortable with the stream of new products coming from Acclaim." Berger originally owned 750,000 shares.

MOVIE LINKS. Acclaim does have some breathing room to develop its new offerings. It can still sell existing WMS games: *Mortal Kombat* has already topped 5 million copies, and more than two million copies of *NBA Jam* have been shipped since it was released Mar. 4. *Mortal Kombat II* is due this fall. Analyst Lee S. Isgur of Volpe, Welty & Co. in San Francisco estimates that Acclaim's profits could rise almost 50% this fiscal year to $42.9 million, as its revenues climb 40%, to $457.4 million.

And Acclaim already has some strong games of its own, including versions of *The Simpsons* and *Terminator 2*. Besides *True Lies*, it has the rights to *Stargate*, a science-fiction film starring Kurt Russell due out in November, and *Batman Forever*, a sequel with Michael Keaton upon which its first arcade game will be based. Still, movie-based games are risky. When Schwarzenegger's *Last Action Hero* bombed at the box office, so did a rival's game version.



Fischbach believes Acclaim's future success may rest on its motion-capture technology. The process uses 4 cameras and 150 sensors attached to 2 actors to record body movements. Data are then entered into a computer to simulate live action. While other companies are dabbling in the process, Acclaim's technology was what persuaded Sega to sign the company up for its new 32-bit system. "We chose Acclaim based on the strengths they have in development and in digitizing real-live action," says Paul Rioux, executive vice-president at Sega. With such endorsements, the loss of WMS may not hurt so much after all.

By Veronica Byrd in Oyster Bay, N.Y.

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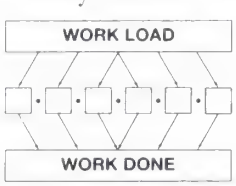

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A BLACK HOLE IN THE BALANCE SHEET

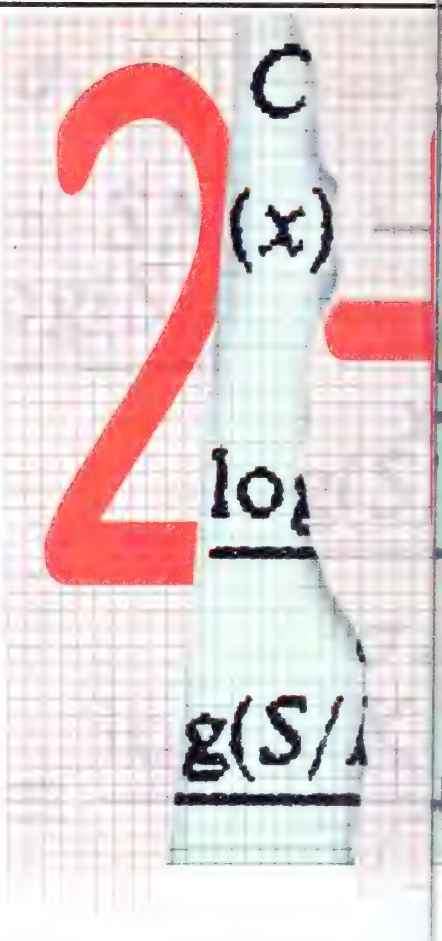
A spate of big losses from derivatives sparks a call for disclosure

When Procter & Gamble Co. announced in April that it would take a $102 million charge for losses on complex derivatives contracts, P&G officials admitted they didn't really understand what they had gotten into. But it's a sure bet that no one was more surprised than investors holding stock in the Cincinnati company. They had seen only scant mention in the company's financial statements that it was involved with derivatives.

Over the past month or so, there has been a steady flow of reports of derivatives losses, which has provoked a debate over whether corporate financial executives are taking undue risks. Many major corporations, from Colgate-Palmolive Co. to Coca-Cola Co., have derivatives contracts tied to hundreds of millions—even billions—of dollars in assets. In most cases, the use of derivatives on their own or as parts of complex financings enables companies to hedge business risks, boost income from investments, and lower borrowing costs. "Today, you can create anything from any kind of asset," says Arvind Sodhani, treasurer of Intel Corp. "You can either find an instrument or have an investment bank custom-tailor it for you." But in some cases, the use of derivatives can backfire—and the effects can be painful and swift.

That, in turn, is focusing new attention on whether corporations are adequately disclosing their derivatives activities, especially the risks that these activities may involve. One angry shareholder has already sued P&G's top executives over the write-offs. Despite their immense size, derivatives and associated products are almost nowhere to be seen in disclosure documents. They are a kind of shadow world of corporate finance, one almost as large as that of disclosed dealings, to which investors, analysts, and the public in general have little access. "Unless you know deal by deal what exposures a company's taken, you don't know what they are," says Jacob Navon, a senior vice-president at Boston Co., whose group manages $25 billion in corporate cash accounts.

SWAPS AND CAPS. Take large swap deals, one of the most common derivatives transactions. They allow companies to restructure their cash flows, shifting, for instance, from fixed-rate to floating-rate debt payments. Most companies reveal the principal amount on which the swap contracts are based. But very few disclose the terms of the swaps and, more important, the fact that some of them may entail sizable credit risks involving the party on the other side of the swap. Linda Bammann, an executive director at New York-based SBCI Swiss Bank Corp. Investment Banking Inc., had a client come to her looking to limit the company's interest-rate cost. She put together a package of 14 different hedges, largely swaps, caps, options and interest-rate collars, to make that possible. But the full impact of these transactions does not appear on the company's balance sheet. To gauge a company's sensitivity to interest-rate and currency moves today, Bammann says financial statements are not enough. "You have to talk to [the company's financial executives]."

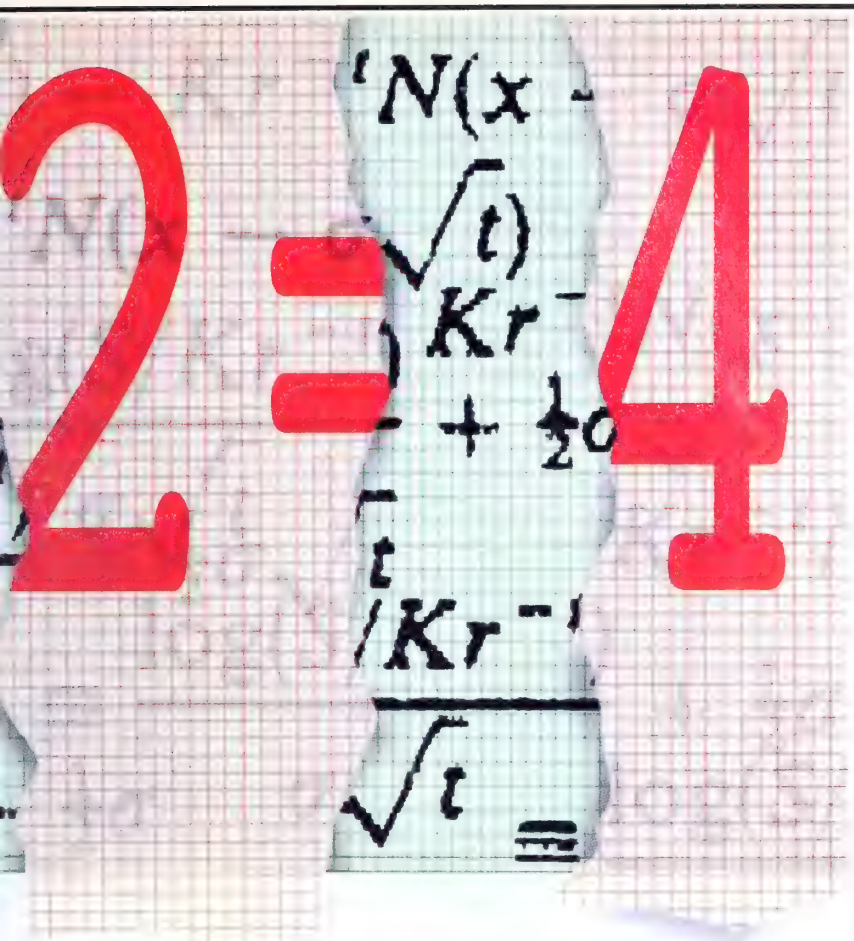


Even more obscure are so-called structured financial products, financial instruments with derivatives attached to alter their yield or principal. Because they are packages of complex financial products, they are more complicated and harder to evaluate than straight deriva-

HIDDEN RISKS

	WHAT COMPANIES DO . . .	. . . AND WHAT THEY DISCLOSE
SWAPS	Companies use swaps, which often last for many years at a stretch, to restructure their cash flows. Often, these swaps expose them to sizable credit risk.	Many companies reveal only the principal amount underlying the swaps they use. They rarely describe the terms and riskiness of the swaps.
STRUCTURED FINANCINGS	Some companies use structured financings for as much as a third of their borrowings. They can be volatile and may expose the company to large risks.	Companies usually disclose little about structured financings other than the principal amount underlying the arrangements.
STRUCTURED NOTES	Companies have issued billions in complex and often illiquid structured notes whose interest payments and principal can fluctuate wildly.	Companies often say virtually nothing about these complex investments. They tend to be lumped into the cash account on the balance sheet.

DATA BUSINESS WEEK



s. Some companies use structured ucts for as much as a third of their ncings. Yet only a small number of panies provide any details.

ften virtually invisible are struc- d notes issued by companies, typi- as part of their medium-term note grams. Both issuers and buyers of e notes can find them to be very uid investments whose interest and cipal payments can fluctuate wildly. many companies holding them sim- lump them into the cash and mar- ble securities line on the balance t, leaving the impression that they as safe and liquid as cash.

LE WARNING? Regulators are now eting the disclosure issue. The Se- ties & Exchange Commission is ex- ing whether corporations are suffi- ly warning shareholders of potential es. The Financial Accounting Stan- s Board has issued a draft proposal would increase disclosure by com- es. The board will meet with banks, stment companies, insurers, and oth- orporations in June. The proposal nly "a small step forward," though, rding to Jeffrey Mahoney, assistant ect manager at FASB. "Our draft cov- some very simple exposures we be- companies have been keeping track ternally," he says.

Many large corporations devote considerable attention to managing their derivatives exposures. But others sometimes get in over their heads when they use derivatives products, as the spate of write-offs of losses over the past couple of months suggest. Regulators argue that requiring companies to disclose more information might cause them to stop and consider whether the transactions are too risky.

Even companies with a good reputation for disclosure report few details about their use of derivatives. Consider Colgate-Palmolive, an active user of swaps, at least one of them having a term as long as 30 years. The company's annual 10-K report and its report to shareholders reveal that about a third of its debt has interest-rate or currency swaps—or both—attached. Colgate says that its contracts are with high-quality companies. Still, its financial reports contain no mention of the credit exposures that those swaps create. And there is little discussion of these contracts, even though Colgate, like every other company, provides much detail, such as maturities, about its conventional debt. Colgate's level of disclosure on derivatives deals is quite typical of most major companies. Says Colgate Treasurer Brian J. Heidtke: "The accounting in this stuff is still underdeveloped, to say the least."

> "The accounting in this stuff is still underdeveloped, to say the least," says Colgate's Heidtke

Intel is another case in point. It provides a broad description of its use of derivatives in its annual report. It even talks about its credit exposure on derivatives. But Intel does not reveal the degree to which it makes sophisticated use of derivatives and structured financial products to boost the yield on its multibillion-dollar cash account. Treasurer Sodhani refuses to say what he earns on the company's investments, and he will not discuss some of his current financing plans out of concern that other companies will pick up on them. "We do some things that nobody has yet discovered," he says.

PERC PERFORMANCE. Intel's financial strategies are highly complex, if the company's past money-management practices are any indication. For example, Intel has made it a practice to buy PERCs, a type of convertible preferred shares issued by many companies in recent years. Intel would short the issuing company's common stock, buy a put on the stock at the conversion price for the PERC, and wind up with an asset whose principal was fixed and whose yield was high.

A significant part of the controversy surrounding disclosure concerns structured notes. Experts say close to $50 billion in structured notes was issued by companies in 1993 alone—and institutional investors of all kinds have purchased them. Boston Co.'s Navon says about 15% of the assets his group manages are in structured notes. The notes' returns can be extremely hard to predict. One typical structure: a 1½-year note where the coupon payments are set at some fixed rate minus the German interbank loan rate. Such a note, with the payments equal to the reverse of some variable rate, is known as an inverse floater, and the coupon rate on that security can abruptly fall to zero if market rates rise.

Financial reports aren't very helpful in gauging the risks of such transactions. Issuers typically say little if anything about their outstanding structured notes. And many companies that buy structured notes as a way to earn high returns on their cash accounts simply include them in the "cash and marketable securities" line on their balance sheets.

Some companies are reluctant to disclose derivatives dealings for competi-

tive reasons. They usually include companies that have set up their treasury departments as profit centers. Profit-oriented corporate treasurers typically feel that if they were forced to reveal details about how they are making money exploiting inefficiencies in the market, others would jump in and copy the trade, and the profits would eventually disappear.

There are, however, a few companies that have been very outgoing about disclosing their derivatives transactions. One example is CIT Group, the Livingston (N.J.) leasing company owned by Chemical Bank and Dai-Ichi Kangyo Bank. CIT, whose stock is not publicly owned, says little in its annual report. But its 10-K filing, which covers two publicly traded note issues, describes in detail the effect of the company's use of swaps and structured products. The disclosure includes its weighted average interest rate on fixed-rate and floating-rate debt with and without the effect of swaps. It also reveals the length of the contracts and the currencies to which CIT is exposed. Says Chief Financial Officer Joseph J. Carroll: "We are publicly owned from a debt point of view, and we feel people have a right to know what we do."

TAYLOR: CIT IS AGGRESSIVE, BUT "WE DON'T TAKE BETS—EVER"

CIT Group is an enthusiastic user of structured products. It is strict about using derivatives only as hedges, according to Corinne Taylor, senior vice-president and treasurer. CIT has a 2% limit on risk: If the company's net interest margin is $500 million, it won't do anything that would put more than $10 million at risk. "We don't take bets—ever," she says. But when it comes to using structured financial tools to cut costs, CIT is aggressive.

RISK FREE. A recent transaction typifies CIT's creative but relatively risk-free use of structured products. The company borrowed $25 million for two years at 22 basis points over the two-year Treasury bill rate using a structured financing, a rate 18 basis points lower than it would have had to pay to simply borrow at a fixed rate. To get the low rate, CIT first borrowed $25 million from an investor and paid a rate of 13.5% minus the three-month Italian interbank rate, which is variable. Then it entered into a swap with Chase Manhattan's securities subsidiary in which CIT paid Chase fixed-rate payments equal to 22 basis points over Treasuries, while Chase paid CIT variable payments at 13.5% minus the three-month Italian interbank rate. In effect, CIT passes along to the investor the variable-rate payments it receives from Chase. CIT does not disclose this particular deal in its 10-K, but it does describe in detail a hypothetical medium-term note issue that resembles this financing.

Also relatively forthcoming is Coca-Cola. While the company does not discuss its credit risk from derivatives, it does describe its approach to hedging and its losses from hedging.

The Atlanta company is an active user of complex financial products, however, a fact that is not readily apparent from its public disclosures. Coke started formal risk management in 1980 when foreign currency and risk-management functions were combined. In 1986, it started using swaps and in 1988 became one of the first corporate users of options. In its 1993 financial statements Coke reported that it lost $29 million (pretax) on hedges. But the company added that the loss was offset by gains on the instruments being hedged.

Some companies are reluctant to disclose derivatives dealings for competitive reasons

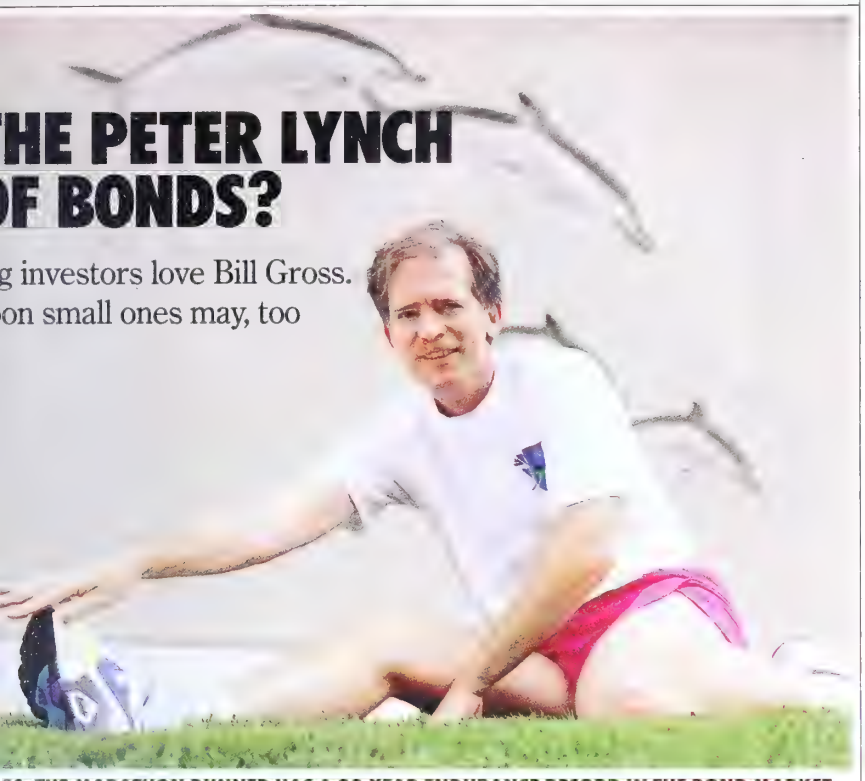
Some banks and thrifts are being required to disclose more than they once did about derivatives transactions. First Union Corp. in Charlotte, N.C., provides several pages of discussion of derivatives usage in its 1993 annual report, for example. Greater disclosure by banks is warranted, say regulators, because problems at banks can have a wider impact than those at corporations. Comptroller of the Currency Eugene A. Ludwig, has called for a closer look at banks' use of so-called exotic derivatives. He points out that if a corporation loses money, it has to deal with unhappy employees, but if a bank loses money, it is directly connected to the payments system, and its problems can spread rapidly. And problems are clearly possible. Ludwig describes a bank with less than $200 million in assets that has a structured note in its investment portfolio whose interest rate is tied to the performance of the Deutschemark and the Spanish peseta vs. the dollar. Says Ludwig: "We are not convinced that they have this instrument for legitimate hedging purposes or that they understand it." The initial interest rate on this note was 9%, but it is currently paying no interest—and it has lost 20% of its market value.

Many companies put derivatives and other structured products to good use. Indeed, many would find themselves with more risk if they did not use the complex products to offset their exposures to fluctuations in currency and exchange rates. Rather than try to limit what they reveal, the growing number of companies that use derivatives would do well to inform investors of the risks—and virtues—of their new strategies. If not, and if P&G's problems are mirrored elsewhere, they run the risk that regulators will make harsher demands.

By Kelley Holland in New York, with William Glasgall in New York, Mark Mallory in Atlanta, and Rick Melcher and Greg Burns in Chicago

HE PETER LYNCH OF BONDS?

g investors love Bill Gross. on small ones may, too



SS: THE MARATHON RUNNER HAS A 20-YEAR ENDURANCE RECORD IN THE BOND MARKET

attled by this year's volatile bond market? Relax, says William H. Gross, one of the country's lead- bond investors and the managing ctor of Pacific Investment Manage- t Co. (PIMCO). Gross likens the bond ket that's emerging to a placid creek ere he played as a child in Middle- n, Ohio. The people along its banks, s Gross, "won't need levees or sand- s." And, he adds, this creek "won't tter lives."

Not everybody thinks there's a kind- gentler bond market ahead. But $55 on—mainly pension money from blue- corporations, state and local govern- nts, and even a few foreign central ks—believes he's right. And for good son. Gross, 50, a soft-spoken mara- n runner, is one of the founders and mastermind of an investment firm has speed and endurance. Since 4, PIMCO has earned an annual aver- return of 11.1%, vs. 9.6% for the man Brothers Government/Corpo- e Bond Index. In the tortured first rter of 1994, PIMCO was down 2.8%, the index fared worse, off 3.1%.

RE VISIBLE. Winning by a percentage nt is no big deal in stocks, but it kes for heroes in bonds. That's why ss is known as the Peter Lynch of ds. "It's hard to add value to a bond tfolio without increasing volatility," s Kathleen A. Crowley, vice-presi- t of Stratford Advisory Group Inc., a sion consulting firm. "But Bill Gross his team manage to do it."

Gross is little known to individual investors, since it takes a cool $75 million to open a separately managed account with PIMCO. That's steep even for many pension funds, which can opt for PIMCO's mutual funds, where the minimum is just $500,000. PIMCO lets individuals with $1,000 into the funds if they come via one of four discount brokerage firms that take care of record-keeping PIMCO doesn't do. Gross also manages Harbor Bond Fund for Harbor Capital Advisors. That fund earned a top rating for five-year risk-adjusted performance in the 1994 BUSINESS WEEK Mutual Fund Scoreboard. But with only $167 million, Harbor Bond is a relatively undiscovered property.

Now, Gross is becoming more visible. In the next few months, PIMCO and four smaller units of parent Pacific Mutual Life Insurance Co. are expected to merge with Thomson Advisory Group LP, a master limited partnership that trades on the Big Board, to form PIMCO Advisors LP. Thomson, which is based in Stamford, Conn., with $11 billion in managed assets, is mainly an equity manager, while PIMCO, which will remain in Newport Beach, Calif., is mostly bonds. Gross says that he hopes to reach out to individual investors through Thomson's mutual-fund arm.

The merger will, for the first time, allow the public to invest in the bond whiz himself. In the merger, units in the Thomson partnership, which now sell at 35¼ and pay a $2.40-a-year distribution, will convert to PIMCO Class A units with a $3.75 payout. Considering the higher payout, the PIMCO units could jump 30% if the deal is completed. The combined firm should have annual revenues of about $250 million.

Star stock-pickers such as Peter Lynch excel by zeroing in on a company's business and ignoring the economy and interest rates. But macroeconomics drives the bond market, so Gross's investment process starts with a two- to three-year economic outlook, which he and his investment staff of 40 thrash out annually in week-long sessions. Gross recognizes that the stronger U. S. economy is pushing up interest rates, but he believes disinflationary forces—such as corporate downsizing, high debt, and cheap labor—will keep inflation in check. Long-term rates, he figures, will fluctuate between 6% and 8%.

Unlike some bond managers, Gross never makes big bets on the direction of interest rates. Instead, he makes many small bets on many sectors of the bond market when the odds are in his favor. That's a skill he honed as a young man, when he parlayed $200 into $10,000 in several months playing blackjack in Las Vegas. PIMCO was early to incorporate mortgage securities, bond futures, and non-U. S. bonds into its portfolios and reaped extra returns because of it.

OPPORTUNITY KNOCKED. Now, anticipating more stable rates, Gross is emphasizing yield over liquidity, boosting returns by buying illiquid private placements. And, he says, when rates are unlikely to plunge, callable bonds—which have higher yields than noncallables—are smart plays, too. He's also opportunistic: In the wake of the global bond rout, he scooped up $5 billion in European bonds.

One reason for PIMCO's success was Gross's early embrace of high-tech bond-picking techniques. But competitors are catching up. Still, "computers and statistics carry you just so far," says consultant James R. Hamilton of Hamilton & Co., who first brought a client to PIMCO in 1978. "Then, you have to make a judgment." As long as PIMCO has Bill Gross, it should have an edge.

By Jeffrey M. Laderman in New York

BEATING THE BOND MARKET

ANNUAL RETURN	[illegible]	[illegible]
1984	14.0	[illegible]
1985	23.8	21.3
1986	18.5	[illegible]
1987	4.1	2.3
1988	9.5	[illegible]
1989	14.5	14.2
1990	8.2	8.3
1991	18.1	16.1
1992	9.0	7.6
1993	12.2	11.0
1994 (10)	-2.8	-3.1

DATA: PACIFIC INVESTMENT MANAGEMENT CO.

PHOTOGRAPH BY SAM [illegible] AMMALA FOR BUSINESS WEEK

BY GENE G. MARCIAL

FOUNDATION HEALTH PICKS UP ITS BED AND WALKS

The past nine months have brought a terrific recovery at Foundation Health, a provider of managed care to more than 3.4 million people. After losing a massive federal contract for Hawaii and California last July that had accounted for about 40% of its revenues, Foundation's stock plummeted from 35 to 18 in a matter of days. But Chairman and CEO Daniel Crowley pushed to broaden the company's nongovernment business of providing one-stop health-care shopping. Result: Profits have surged, and the stock has soared to 41.

With such a phenomenal rebound, has Foundation reached its peak? Not by a long shot, say some big investors who snapped up additional shares when the stock plunged. These include T. Rowe Price, which increased its stake to 10%, and Mutual Series Mutual Fund, now a 5% stakeholder.

In spite of the stock's bounce-back, the "valuation of Foundation remains compelling, and we are retaining our buy rating on the shares," says Margo L. Vignola, a health-care analyst at Salomon Brothers. She notes that Foundation's rapid internal growth, combined with its acquisitions of other companies, more than made up for the loss of its five-year, $3.5 billion contract for Civilian Health & Medical Programs for Uniformed Services.

PROGNOSIS GOOD. In a matter of days, the company is expected to announce the acquisition of a company that provides a 24-hour-a-day emergency service to care for job-related injuries. There are also whispers that Foundation will shortly sign a strategic alliance with a larger health-care corporation. On May 4, Foundation announced the signing of a two-year Medicaid contract to provide managed-care dental coverage in Hawaii.

Through its subsidiaries, Foundation offers group, individual, Medicare, and Medicaid HMO plans—including dental, eye, and prescription-drug services.

Foundation is still trading near the bottom of its peer group in terms of its price-earnings multiple. Its current p-e is 14 vs. a group average of 20.

Foundation surprised analysts when it announced the results for its fiscal third quarter ended Mar. 31. Earnings came in at 68¢ a share, up from expectations of 63¢. Consequently, Vignola has raised her estimate for the year ending June 30, 1994, from $2.65 a share to $2.77. Her fiscal 1995 estimate is $3.10. Revenues are expected to rise to $1.8 billion in 1995, up from 1994's estimated $1.7 billion.

IS BANKERS TRUST PAST ITS PEAK?

Shares of Bankers Trust have been on the rebound, despite adverse publicity over its proprietary trading in securities and derivatives. The stock has climbed in recent days to 69, up from 65. But don't bank on further advances, warn some pros. They worry that, since these activities account for 87% of earnings, results for 1995 will be volatile.

"The stock deserves the lowest price-earnings multiple in the banking industry because of the high risk that it presents to investors," says veteran analyst George Salem of Prudential Securities. He thinks the price will tumble to the 50s. So he recommends selling the stock.

Bears note that Bankers Trust is in the midst of a controversy over its derivatives business. Government regulation, which could curtail the volume of these highly sophisticated businesses, is currently being talked about in the U. S. and countries overseas, they warn. The Securities & Exchange Commission is said to be probing the impact of such derivatives on certain shareholders of companies that have suffered losses. Furthermore, Standard & Poor's has put some $5.6 billion of Bankers Trust debt on credit watch because of its heavy reliance on proprietary trading.

Salem cautions that other factors will likely contribute to an earnings contraction at Bankers Trust. The company, he expects, will have to provide a loan-loss provision of about $30 million per quarter just for possible routine losses. And he sees fewer gains on asset sales and a flattening-out of revenues from selling fewer derivatives. Therefore, Salem predicts flat quarterly earnings ahead. He says 1995 earnings are "virtually impossible to predict" because of Bankers Trust's dependence on derivatives. A spokesman said investors should not overlook the fact that proprietary trading has been profitable over the years.

BIG DOLLARS FROM WINSTAR DIALING

Winstar Communications, once a tiny speck in the long-distance business, has suddenly become a potential major player in the nation's rapidly growing telecommunications industry. Its acquisition in February of the right to buy 80% of Avant-Garde Communications "has radically changed the company," says investment adviser Tom Fendrich of Fendrich Associates Institutional Research.

Avant-Garde owns microwave-radio licenses to deliver voice, data, and video services over 200 megahertz of exclusive bandwidth capacity in 30 of the nation's top markets, including Atlanta, Dallas, Los Angeles, New York, and Washington, says Fendrich. He figures these licenses, which could be used by Winstar for competitive-access-provider (CAP) phone services in metropolitan areas, are worth $25 a share in Winstar stock based on the price of comparable licenses that Nynex recently purchased. CAP lets customers bypass the local telephone company in connecting to long-distance service. Winstar is currently a low-cost reseller of long-distance services to businesses and homes in the U. S.

Fendrich figures that the stock, now trading at 4½, is significantly undervalued, with a potential to rise to 15 in the next two years. He expects Winstar will start making money in the year ending Feb. 28, 1995, with a profit of 10¢ a share. In 1996, earnings should to rise to 65¢, he figures.

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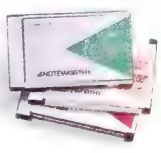

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CLINTON'S LIGHTNING ROD AT THE FCC

Pushing the President's vision, Chairman Hundt draws sparks

In late March, Reed E. Hundt had to make a choice. The new Federal Communications Commission chairman could go to the National Association of Broadcasters annual convention in Las Vegas, a de rigueur appearance for an FCC chief. Or he could fly to a conference in Buenos Aires on the development of telephone infrastructures in the Third World, something that could help U. S. telecommunications companies expand overseas. Hundt opted to head south and even persuaded his old prep school chum, Vice-President Al Gore, to show up at the Argentina meeting.

Some broadcasters were outraged at the snub, joining cable operators and telephone carriers in a chorus of growing dismay over Hundt. The flaunting of tradition was just one more goad to the critics who have attacked the 45-year-old antitrust litigator since he was confirmed by the Senate last November. But the trip to a conference on emerging markets represents Hundt's eagerness to make the communications industry an engine for economic prosperity. His mission, as he puts it, is to "fashion a regulatory environment that stimulates private investment, leading to robust economic growth and challenging new jobs in the communications sector."

That goal will be Hundt's guide as he ushers in a fresh era of competition for the telecommunications industry. He wants to make sure a new wireless phone service will be able to have the financial muscle to compete with existing cellular service. He is mulling new rules for broadcasters so that they can compete more effectively with cable and phone companies. And he will be in charge of guiding the phone industry toward more competition. The blueprint for this will be legislation that Congress is expected to pass this summer—the first major change in the nation's communications laws in 60 years.

So far, Hundt has moved with a deliberation that can be seen as sensible or obstructionist, depending on the viewer. "We worry that he wants to reinvent the wheel with every new issue that comes along," says one telephone-industry executive. One of Hundt's first actions since taking office, for example, was to delay the auction of licenses for the wireless service called personal communications service (PCS) so he could study the issues. The auction, first scheduled for early 1994, is now tentatively expected to go forward this summer or fall. Potential operators worry the delay could cause them to fall way behind in the wireless wars. But Hundt says the issue is too complex to rush: "I worry that five years from now, when my term is up, I'll say, 'Boy, was this decision a mistake.'"

Such cautiousness should be commended, Hundt's supporters assert. "This is not a man propelled by emotion or impulse," says Clarence L. Irving Jr., head of the National Telecommunications & Information Administration, part of the Commerce Dept. "He believes in his intellect and that reasonable people will see the logic of his ways."

HUNDT MAY OVERSEE A HUGE PHONE-INDUSTRY OVERHAUL

OLD YALIES. At first blush, Hundt might seem an odd choice for the job, and he wasn't the White House's first pick. President Clinton had intended to nominate Antoinette D. Cooke, a Washington communications attorney. But she withdrew from consideration over questio about her involvement in a 1980s rad deal. Hundt wasn't even the obvio backup. In his 20 years in the Washin ton office of Los Angeles-based Latha & Watkins, he only represented co munications clients on antitrust matte

But Hundt shares the Administr tion's core belief that high-tech indu tries must play a key role in the eco my's future. It helped that he has clo personal ties to both Bill Clinton, a Y University Law School classmate, a Gore. Those ties, however, have rais

rows, especially among Republicans want the independent regulatory ncy to be truly independent. Repre- ative Jack Fields (R-Tex.), the rank- Republican on the House telecom- ications subcommittee, has blasted dt as a "political puppet."

NOTES. Hundt denies the charge, but e's no denying that he and Gore been close since their days togeth- at Washington's St. Albans prep ol. The FCC chief says he talks to every few weeks, although he in- they don't discuss specific matters ding before the agency.

nd he does win praise in Washing- knowledge of complex technology. Hundt sees one of his main missions as making sure that U. S. companies have access to the many tightly regulated telecommunications markets abroad. In early April, Hundt met with Canadian officials to discuss, among other things, allowing U. S. direct-broadcast satellite companies to serve Canada. The FCC will be working with the International Telecommunications Union to make worldwide frequencies available for new satellite phone services. And Hundt has been active in helping Third World countries develop telecommunications infrastructures, figuring such progress will open up new markets for U. S. companies.

The FCC chairman's role as an industry advocate overseas was obscured by the blasting he took at home for the agency's decision in March to cut cable rates by 7%. The cable industry blamed him for killing two big deals, Bell Atlantic's $21.4 billion acquisition of Tele-Communications and Southwestern Bell's $4.9 billion joint cable-TV venture with Cox Enterprises. Hundt insists the rate decision was actually a boon to the industry because it permits cable operators to charge consumers the cost of new channels plus 7.5%, while the old rules limited fees for new channels to the average cost of the system's channels.

But his defense falls largely on deaf ears. As Senate Minority Leader Bob Dole of Kansas put it: "I can assure [Hundt] that these deals are not being called off just to embarrass him."

Hundt hasn't won much support for his reasoning behind the delay in the PCS auction, either. Under the original PCS proposal, as many as seven licenses would be awarded in each operating region. But Hundt thinks the industry could be launched faster by giving out fewer licenses, which presumably would go to deep-pocketed bidders. "It's very important that we grant licenses that provide economies of scale," he says.

Hundt's move could backfire, though, by postponing the issuance of any licenses, handing the advantage to wireless technologies ready to go now. The auction delay "is starting to undermine investor confidence," frets Thomas A. Stroup, former president of the Personal Communications Industry Assn.

FERTILIZING MISSION. Not all of Hundt's actions have met with criticism. He backs legislation that would give broadcasters more flexibility in the way they use additional spectrum space first allocated in 1991. The measure would give the FCC the power to decide what new services broadcasters could provide, from interactive channels to data transmission. "This is crucial to our survival as an industry in the future," says Jeffrey Bauman, general counsel for the National Association of Broadcasters. To give broadcasters an additional boost, Hundt is considering expanding the number of stations a network may own, thus enhancing their ability to distribute programming. "I just want to do what we can to create the conditions that will help broadcasters flourish," the chairman says.

The pending legislation also would overhaul phone service. The FCC would supervise the growth of competition for the local network in return for letting the Baby Bells reenter the $60 billion long-distance business. But that won't be allowed until their local rivals, in the FCC's view, are strong enough to prevent the Bells from subsidizing long-distance business with local revenues.

All these decisions are sure to generate more controversy. But the FCC chief says he is only looking to strengthen the communications industry. "After all, I have a 20-year history of being in favor of competition," he says. "That's what we antitrust lawyers are always arguing for." Still, any change in the status quo can't help but antagonize some competitors.

By Mark Lewyn in Washington

QUESTIONS THAT KEEP REED HUNDT UP AT NIGHT

BROADCASTING Should the FCC allow broadcasters to use part of their spectrum for services such as data communications, rather than just for HDTV? Should restrictions be removed that limit the number of stations the networks can own?

WIRELESS How should the agency shape the market for a new form of wireless communications called personal communications services? Also, the FCC must decide how to auction off PCS licenses.

TELECOMMUNICATIONS Should U.S. telecom markets be made open to foreign competition only if they also have greater access to foreign markets? Also, the FCC is looking for ways to encourage Third World countries to develop telecom infrastructures that would use U.S. equipment and services.

ACCESS How can regulators make sure that universal access to phone service is maintained as the communications industry changes and evolves?

INTERNAL ISSUES How can the FCC install state-of-the-art equipment, everything from phones to computers, so that it can better deal with growth in the businesses it oversees?

for being more than a political crony. ighly analytical lawyer, he is known poring over the details of issues nout losing sight of the big picture. a recent hearing on Capitol Hill, he wered a barrage of technical ques- s on such issues as universal ser- without consulting notes or aides. us far, he has not ducked any of the gh questions," says Representative vard J. Markey (D-Mass.), chairman he House telecommunications and fi- ce subcommittee.

His job encompasses more than just a

AMDAHL ESCAPES 'DEATH VALLEY,' BUT NOW WHAT?

The computer maker is profitable again, but the future looks dicey

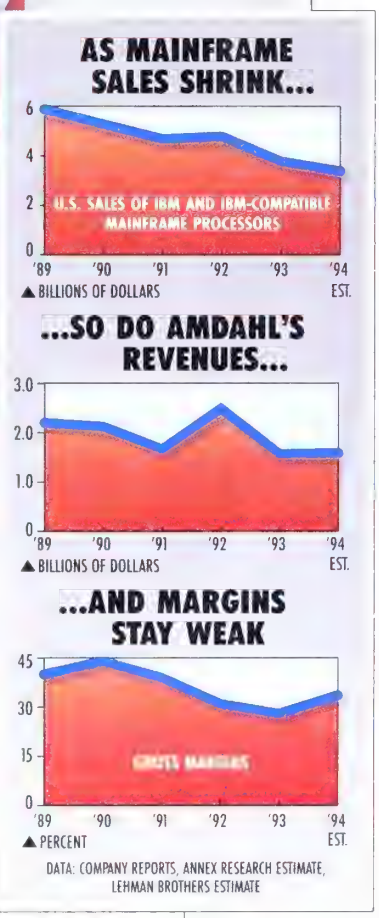
It looked like the end of the world. In September, 1993, recalls E. Joseph Zemke, chief executive of mainframe computer maker Amdahl Corp., sales simply dried up. Already buffeted by smaller, cheaper machines, Amdahl had nothing on its order books. "It was like Death Valley," Zemke recalls. "I still don't know what happened." But he knew what to do: hunker down, close factory lines, and slash the workforce for the third time in nine months.

The bitter medicine worked. The Sunnyvale (Calif.) company surprised Wall Street on Apr. 25 with a $7.1 million first-quarter profit—the first since late 1992. But Amdahl's far from out of the woods. Almost all of its $1.7 billion in revenues came from sales of IBM-compatible mainframes and related gear, a market that declined 21% last year (chart) because of drastic price cuts of 35% a year since 1990.

Amdahl's survival plan will require a major shift in its approach—and a bit of luck. Instead of being an adept follower of market leader IBM, Amdahl must forge its own path—for the first time in its 20-year history. Its plan: take its own mainframes, combine them with the industry's hottest hardware and software, and sell the package to large corporate customers. To do that, says Gartner Group analyst Charles C. Burns, "the whole company needs to dramatically change its stripes."

ON THE FARM. To Zemke's credit, Amdahl has gotten off to an aggressive start. During the past 10 months, it has forged three major alliances—with Electronic Data Systems, Sun Microsystems, and nCube, a maker of "massively parallel" computers that crunch databases at blinding speeds. With EDS, Amdahl has a joint venture to market Amdahl's Huron software-development system, while the deals with nCube and Sun call for Amdahl to resell those manufacturers' machines to Amdahl customers.

CEO ZEMKE'S CUTS GAVE AMDAHL BREATHING ROOM



In addition, Amdahl is now farming out mainframe work. In order to move quickly to lower-cost processors using the CMOS (complementary metal-oxide semiconductor) technology that is used in personal computer chips, Amdahl is relying heavily on Fujitsu Ltd. The Japanese company, which owns 45% of Amdahl's stock and which has supplied much of its technology, now will take over the development and possibly even manufacturing of the new machines.

But ultimately, reselling other companies' machines simply won't bring in very attractive profits to Amdahl. Analysts estimate that the company's sales of Sun machines, for instance, carry gross margins of only about 20%, below already compressed 28% mainframe margins (chart). Zemke says that it's worth the price: This way, Amdahl machines still anchor the customer's data center.

That will allow Amdahl to play its aces in the hole: service and consulting, which consistently top even IBM's in market researchers' surveys. Amdahl's maintenance, support, and consulting services—already making up 28% of sales—grew 11% last quarter, partially countering the drop in hardware. And nonhardware gross margins are at a hearty 45%, some 17 points higher than hardware.

But the long-term picture is less clear. Robert Djurdjevic, president of Annex Research, thinks that Amdahl should focus its attention more on specific markets. "They're throwing a dart here and a dart there," says Djurdjevic. "What's missing is a blueprint."

HIGH RISK. Moreover, Amdahl's record of developing and marketing new technology is decidedly mixed. The company dropped a long-awaited Unix mainframe project last year because it would have cost too much to build. So customers may well be wary of fresh technology forays, such as the nCube deal. To buy that setup, says John Wood, vice-president of computer and network services at Royal Bank of Canada, would be "a pretty high-risk thing to do." Meanwhile, the competition is intensifying. On Apr. 27, Hitachi Ltd.—the third player in IBM-compatible mainframes—announced plans to use IBM chips instead of creating its own.

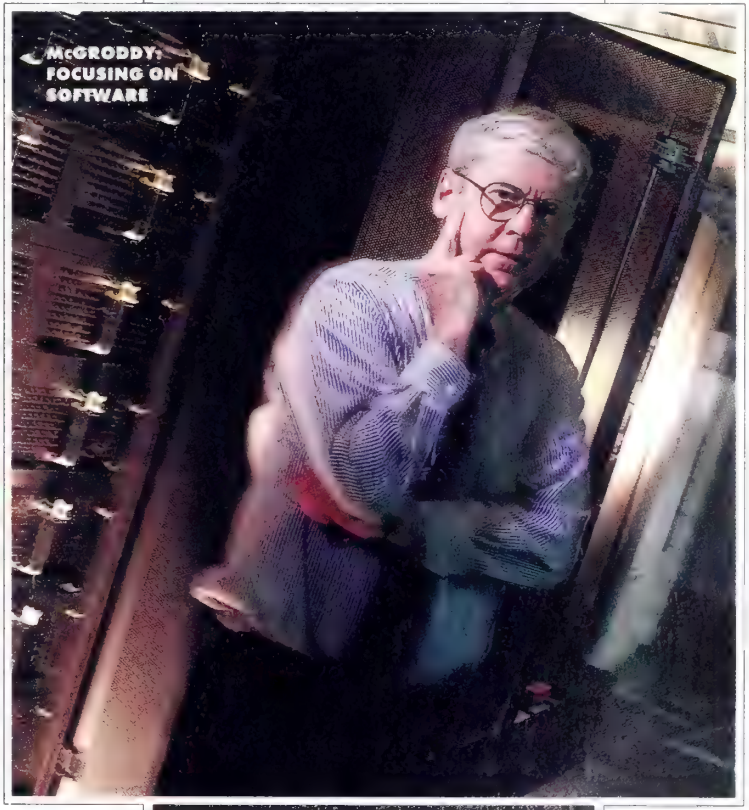
Still, Amdahl has some advantages. Its reduced size means that the company can move more quickly than rivals such as IBM. The question is where to move. "They're going to have to demonstrate that," says Stan Johnson, information services manager with the Port of Los Angeles, "or they're going to become a very minor player." Or find themselves in Death Valley once again.

By Robert D. Hof in Sunnyvale, Calif.

BIG BLUE STILL IG ON RESEARCH? YOU BET

hough cuts have shaken the department, IBM's research wing is now a key part of operations

hings looked dark for IBM's vaunted Research Div. in early 1993. It had risen from a converted fraternity e on New York's Upper West Side ecome a research powerhouse with -to-back Nobel prizes in physics. its budget was being slashed, and e was talk that it would be dismanalong with the rest of the company. les, the new chief executive of IBM a cigarette guy. What would the former head JR Nabisco Inc. have cientists and computer s who wouldn't know a call from a dividend? st over a year later, ppears many of those s were exaggerated. rman and CEO Louis V. tner Jr. is turning out e one of the most agsive exploiters of IBM arch since Thomas J. son Jr. founded the di- in 1956. Gerstner's ecessor, John F. rs, was moving toward ng IBM into a brace of Blues. By contrast, tner is intent on using technological strength unified IBM. And he's ng on IBM Research to So instead of being gated to the role of viaries or troubleshootresearchers are being ght into everything product planning to orate strategy-setting.



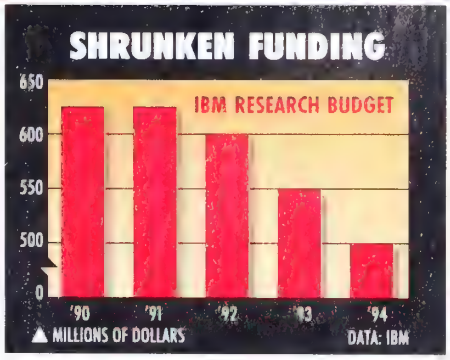
he changes at IBM Research aren't ood news, to be sure. Like AT&T Laboratories and other industrial the division is becoming less national and global scientific rece as it focuses more on the needs e company that pays its bills. Unities and government labs aren't ng up the slack. "If IBM is getting who's going to do it?" asks Linton almon, manager of microelectromeical systems at the National Sci- Foundation.

Still, after an awesome $13 billion in losses in 1992 and 1993, IBM and its shareholders were in no mood for altruism. The impressive thing is that the labs have remained as intact as they have. True, Gerstner has made further cuts in the division's budget—to $500 million this year from $550 million in 1993 (chart). But proportionally, the Research Div. has been cut back less than the overall budget for research, development, and engineering. And it's one of the few parts of IBM that has been spared layoffs. "We've never had one, and it's my intention that we'll never have one," says James C. McGroddy, IBM's research director. "As far as I can tell, I have Lou's support."

What's more, half a billion dollars is a substantial sum for science. The division continues to maintain 2,600 people in Westchester County, N.Y., San Jose, Calif., and Zurich. Notes Jeffrey M. Jaffe, the Research Div.'s vice-president for systems and software products: "We're not exactly suffering. Other research people I talk to would kill to get our budget."

FRESH THINKING. Gerstner demonstrated his commitment to the division early on, when he made the Thomas J. Watson Research Center in Yorktown Heights, N.Y., his first official visit from the Armonk headquarters. He since has turned to researchers to fill top advisory posts: Former Vice-President for Physical Sciences and Technology Dean E. Eastman, for instance, is leading a project under chief strategist James A. Cannavino to reengineer IBM's hardware-development process. And researchers were gladdened when Gerstner appeared in the latest annual report with an odd-looking laptop computer prototype, code-named Leapfrog, that came out of the division.

Of course, McGroddy knows that the only way to retain Gerstner's support is to prove that the division is vital to IBM's future. To stimulate fresh thinking, he has installed a brand-new team of four vice-presidents since last year. He also is bolstering joint programs with operating divisions and encouraging his researchers to collaborate directly with



IBM RESEARCH: GETTING MORE FOR LESS

IBM Research Director James C. McGroddy is seeking more useful results in spite of a $125 million budget cut. Here's how:

CUT PHYSICAL SCIENCES

The Research Div. has cut base technologies—including semiconductor materials, chip packaging, displays, and its Nobel prize-winning physics research—to 25% of its budget, down from 40%.

BEEF UP SOFTWARE

Under McGroddy, software and services research is up to nearly 25% of the Research Div. budget, from around 5% three years ago. Software was previously considered too "applied" for the research staff.

COLLABORATE

Researchers are leaving the ivory tower to work more closely with IBM operating units, with outside customers, and with partner companies, such as Siemens, Toshiba, Analog Devices, and Seiko.

outside companies, such as Siemens and Toshiba in memory chips, Analog Devices in chip materials, and Seiko Telecommunication Systems in traffic data terminals. The interchange helps IBMers grasp real-world problems: "It's been like engineers dealing with engineers," says Michael C. Park, the Seiko unit's vice-president for business and network development.

Most controversially, McGroddy is devoting more resources to research in software, which is increasingly important to IBM, while deemphasizing research in the physical sciences. Some of IBM's top physicists have departed, while others have taken emeritus status, including Benoit Mandelbrot, a pioneer in chaos and fractal theory.

McGroddy has little patience for complaints that physics is being given short shrift. He says that the technologies that set IBM apart in the marketplace are more and more related to software and system design, not such base-layer hardware as superfast semiconductors. The division has slashed or abandoned work in gallium-arsenide chip materials, bipolar transistors for mainframe computers, and the costly thermal-conduction modules that keep bipolar chips from overheating. Meanwhile, it's pumping money into such software-related fields as optimization, a fertile branch of math that can help IBM customers ranging from airlines to supermarket chains.

GALAXY STUDY. The search for relevance predates the latest crisis at IBM. Ralph E. Gomory, who ran the division from 1970 to 1986, instituted the first joint programs with the operating divisions, and John A. Armstrong furthered the efforts in his tenure as research chief from 1986 to 1989. The goal of the joint programs was to speed products from lab to market. But forming them required surmounting huge political obstacles. Despairing of change, William T. Siegle quit as director of IBM Microelectronics' Advanced Technology Center in 1990, before its developers were united with the Watson researchers. He became chief scientist at Advanced Micro Devices Inc. "Frankly," says Siegle, "one of the things that motivated me to leave was fear that it couldn't happen." But the union did happen. Today, researchers and developers collaborate so closely in IBM's Semiconductor Research & Development Center in East Fishkill, N.Y., that it's impossible to tell who's who without reading their badges.

The pressure to be "vital to IBM"—a stock phrase—is teaching cloistered scientists what business is all about. Take Roger H. Koch, manager of superconducting science & technology. He was rebuffed internally around 1990 when he broached the idea of developing superconducting sensors for the U.S. Navy. "They said: 'We don't deliver products; we deliver paper,'" recalls Koch. Now, Koch is managing that very job. The rewards, he says, are different: building things rather than satisfying curiosity. Adds Koch: "The people who are willing to change their heroes, they do very well."

> The pressure to be "vital to IBM" is teaching cloistered researchers what business is all about

Relevance notwithstanding, McGroddy doesn't want his agenda controlled entirely by short-term considerations. History shows why: IBM's mainframe computer executives long opposed building parallel-processing supercomputers that could operate independently of a traditional mainframe, fearing that they would cannibalize mainframe sales. But the Research Div., using its own funds, persisted with the project anyway. So when the mainframe execs finally bowed to the inevitable, the company was ready with products.

Today, with Gerstner's approval, only about half of the Research Div.'s budget is devoted to supporting projects in the operating units. For the rest, the division sets its own priorities. Meanwhile, a slim 3% of the Research Div. budget—down from 4% a few years ago—goes to what is awkwardly called "disconnected" research. While some projects may end up in products some day, other seem driven mainly by curiosity or quest for prestige. Researchers are stud ying phenomena ranging from quantu corrals to interacting galaxies to a mat ematical model of epilepsy. One researc er recently calculated the mass of th proton and other particles, "providin new evidence for quarks and the theor of quantum chromodynamics," the div sion's magazine said last year.

NEW STRESS. IBM Research isn't in th clear yet. After three years of cuts, m rale below the top ranks is weak. La year, only half the respondents answere favorably to a question about satisfactio with the division. "There's still a lot nervousness, a lot of skittishness," say Mark F. Bregman, who as vice-pres dent for systems, technology, and sc ence oversees the hardest-hit units.

If McGroddy can keep the mone coming in, that anxiety should diminis But researchers are coping with a ne kind of stress: overwork. Wrote one em ployee in TALKJIM, an electronic foru with McGroddy held earlier this yea "The short-term focus and the emphas on development has left little time an energy for the pursuit of technical vita ity." The pressure for results is eve higher at the top. The overbooked Bre man appears wistful that he may nev get back to measuring the mass of th neutrino, a favorite project that now likely to be passed off to a universit Bregman, 36 and married with two ch dren, starts work at 7 a.m. and occ sionally stays past 10 p.m. "There's ju not slack anymore," he says.

At least, though, it's nice to be consi ered useful. In the Ivory Tower er when researchers were prized principa ly for their I.Q.s, "everyone was jo tling to prove who was smartest," say Bregman. "We don't have time for th now." With its increased focus on cost-e fective results—rather than endowin the world with scientific discoveries IBM Research is "becoming a little mo like the rest of the [electronics] indu try," says AMD's Siegle. For a compan facing challenges as daunting as IBM that's probably a sensible thing to do.

By Peter Coy in Yorktown Height N.Y.

D BY OTIS PORT

A NEW METRIC PUSH, UNCLE SAM ES THE WHOLE NINE YARDS

Trying to shove the metric system down America's throat back in the 1970s produced a nationwide gag. So this time, the Commerce Dept. is offering a sweeter deal: Learning to measure in millimeters instead of inches won't be mandatory—unless you want to sell something to the federal government.

Soon, Uncle Sam's ness will be conducted exclusively in metrics. Since Washon is the biggest customer for just about everything, few porations will be able to dodge the switch. Already, new eral buildings are being designed with metric specifica-s. And by 1996, highway construction funded by Washon also will use metric units. The American public can g its feet for as long as it wants, says Gary Carver, who ds the metric push at Commerce, but it's essential that ness adopt metrics rapidly. Sticking with inch/pound mea-es, he adds, just gives other countries an excuse to dis-inate against U. S. products.

OENGINEERING MES TO THE POTATO PATCH

potato resistant to the blight that caused the Irish famine 150 years ago has just sprouted at Purdue University. But not too late to help the Irish—or Idaho farmers. The dis-e remains the No. 1 potato pest, and a particularly nasty, icide-resistant variety of the fungus popped up in 1991. o boost the defense system of spuds, Purdue researchers rowed a gene from tobacco plants and inserted it into ato plants. This gene codes for a protein, called osmotin, brings death to the fungi by chemically drilling holes in r cell membranes. For humans, the protein is probably e, says horticulture professor Paul M. Hasegawa, since it's duced by many food plants. While petri-dish results in laboratory are promising, the field will be the true test of potato's new genetic armor, says Hasegawa. His group is ady working to adapt the technique to other crops, in-ding soybeans, corn, tomatoes, and carnations.

IS CHIP'S A CHAMP FULL-MOTION VIDEO

ainting a computer screen with detailed graphics images is a time-consuming chore. That's why personal computers d help to handle full-motion images like TV signals, which uire the screen to be painted at least 30 times a second. rmally, the assist comes in the form of a special video cessor and extra memory chips on a plug-in card. But den Technology, an Austin (Tex.) startup, thinks there's a ter way: Combine the memory and logic circuits on one o, so signals don't have to flit so far back and forth.

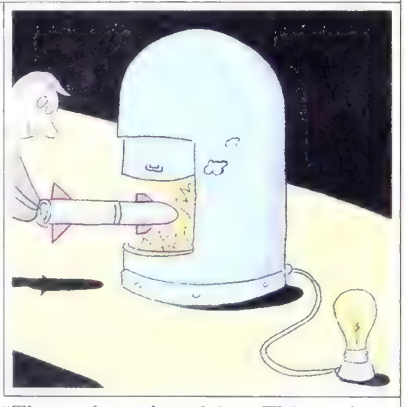
With these hybrid logic-in-memory chips, Linden President Lewis Larsen asserts that PCs can be built with the graphics power of a workstation from Silicon Graphics Inc.—at one-third the cost. "The big chipmakers think we're crazy," says Larsen, "but we see a $30 chip that can push 1,000 MIPS [millions of instructions per second]," or several times the speed of other microprocessors, "and render full-motion virtual reality scenes at TV rates." The chips will be produced by Alliance Semiconductor Corp. in San Jose, Calif., which also has been working on its own logic-and-memory combination chip. That chip is at least a year from introduction, and it's for "a totally different application," says Alliance President N. Damodar Reddy. "But we're satisfied that both it and Linden's logic-in-memory technology are very doable."

A LASER THAT CHANGES ITS STRIPES FOR DIFFERENT JOBS

Imagine a bowling ball rolling down a flight of stairs covered with pudding. Upon hitting each step, it sends some pudding splattering. That's kind of what happens inside the new quantum-cascade semiconductor laser developed at AT&T Bell Laboratories—a laser that's fundamentally different from all previous ones.

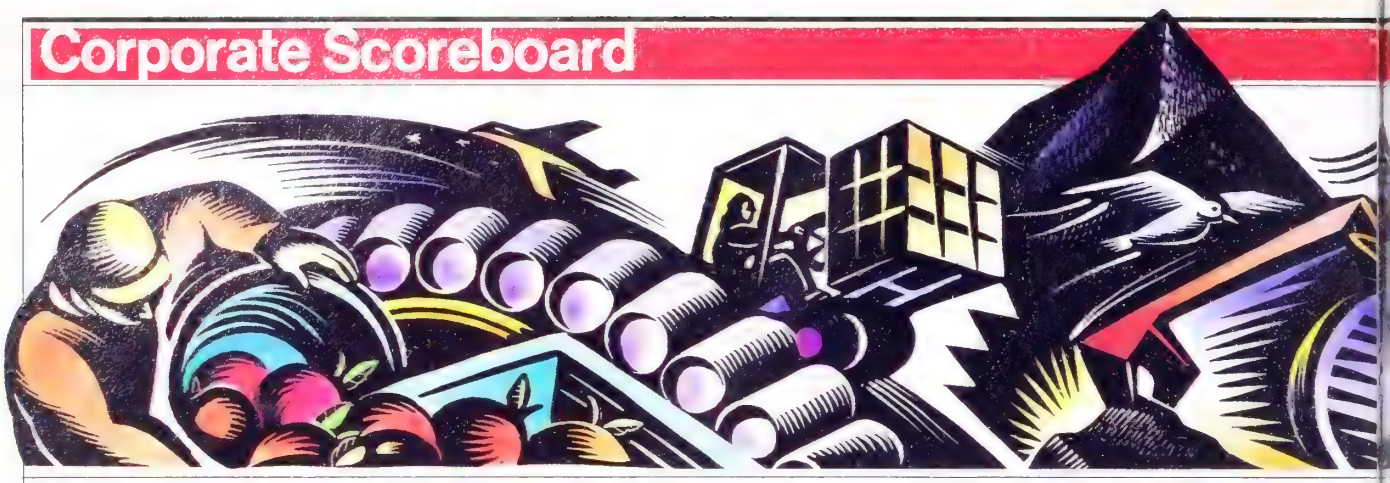
Normally, lasers produce light from the collision of opposite charges—negative electrons annihilating positive particles, or "holes," in a flash of energy. But the new laser needs only electrons. The upshot: Its light can be easily changed for different jobs just by varying the thickness of the "pudding" on the microstairs inside its semiconductor crystal. As electron balls plop into the pudding, photons of light get kicked out. Their color depends on the pudding's thickness—and how much energy the electrons lost in getting through that layer of material. Bell Labs says the stair-step lasers should be ideal for jobs that require light beams to travel through air, including short-range communications and monitoring air pollution.

BEATING NUCLEAR WARHEADS INTO POWER PLANTS?



What if there were a way to "burn" nuclear warheads to light cities and heat homes? Well, Asea Brown Boveri Inc. in Stamford, Conn., wants to build a nuclear-power plant that could be fueled in part with plutonium from decommissioned warheads. That would be more efficient than encasing the plutonium in glass and burying it deep in the earth. "That takes electricity. This makes electricity," says Kenneth R. Rohde, product manager for nuclear systems at ABB's Combustion Engineering Inc.

ABB seems well positioned to get the business because it has the only nuclear-plant design that can handle an entire fuel core of mixed plutonium and uranium. The plant has extra control rods to slow the hot plutonium fission—a relic of a failed 1960s scheme to burn reprocessed nuclear waste. The Energy Dept. will spend about two years studying ideas for weapons disposal. If Energy likes ABB's concept, it will open the job to all bidders.



ROBUST, ANY WAY YOU

Have we been up so high that this looks like down? The economy was growing in the first quarter of 1994, consumers were eager, and sales were accelerating. And earnings rose a healthy 16% for the 900 companies in BUSINESS WEEK's Corporate Scoreboard. Although that's a far cry from the 27% leaps in both the final quarter of 1993 and the first quarter a year ago, it's a pretty good showing by traditional measures—much like the results posted in the happy, prerecession years of the late 1980s.

Why didn't first-quarter profits keep up the torrid pace of 1993? Keep in mind that last year's profits looked terrific because they were measured against the lousy earnings performance of 1992. Now, the comparisons get tougher. But just as important, compa nies were no longer able to punch up their bottom lines quickly by downsizing as they did through much of 1993. Com panies laid off thousands of workers as a way to cut labor expenses, lift produc tivity, and thus boost profit margins But the temporary payoffs of restruc turing have nearly played themselve out. "There was little growth in produc

WINNERS AND LOSERS IN FIRST-QUARTER PROFITS

THE INDUSTRIES

THE SHARPEST GAINS	Percentage change from 1993's first quarter	THE DEEPEST DROPS	Percentage change from 1993's first quarter
PRINTING & ADVERTISING	531%	AIRLINES	LOSS
COMPUTERS & PERIPHERALS	367	ALUMINUM	LOSS
SPECIAL MACHINERY	228	INSURANCE	–44%
OTHER METALS	174	PAPER CONTAINERS	–30
APPLIANCES	116	APPAREL	–27
CARS & TRUCKS	114	RETAILING	–25
BANKS-EAST	65	DRUG DISTRIBUTION	–25
AUTO PARTS & EQUIPMENT	49	POLLUTION CONTROL	–21
TRANSPORTATION SERVICES	48	BUILDING MATERIALS	–15
ELECTRONICS	45	PAPER	–12
BROADCASTING	45	TOBACCO	–10
TELECOMMUNICATIONS	43	GAS UTILITIES	–9
CONSTRUCTION & REAL ESTATE	41	FOREST PRODUCTS	–8
MISCELLANEOUS LEISURE	38	ELECTRICAL PRODUCTS	–5
SEMICONDUCTORS	35	TEXTILES	–4

ALL-INDUSTRY AVERAGE: +16%

THE COMPANIES

WHO MADE THE MOST	Millions of dollars	WHO LOST THE MOST	Millions of dollars
GENERAL MOTORS	$1,612	KMART*	$615
PHILIP MORRIS	1,171	ALLSTATE	275
EXXON	1,160	20TH CENTURY INDUSTRIES	256
AT&T	1,094	USAIR GROUP	197
GENERAL ELECTRIC	1,068	DIGITAL EQUIPMENT**	183
CHRYSLER	938	TRANS WORLD AIRLINES	122
FORD MOTOR	904	WOOLWORTH*	111
WAL-MART STORES*	868	3COM**	103
MERCK	675	SEARS ROEBUCK	98
DUPONT	642	DELTA AIR LINES**	78
INTEL	617	PITTSTON MINERALS GROUP	74
CITICORP	609	UAL	71
BELLSOUTH	585	OWENS-CORNING FIBERGLAS	67
BRISTOL-MYERS SQUIBB	581	LAFARGE	62
JOHNSON & JOHNSON	544	WESTPOINT STEVENS	55

*FISCAL FOURTH QUARTER **FISCAL THIRD QUARTER DATA STANDARD & POOR'S COMPUSTAT, A DIVISION OF MCGRAW-HILL INC

LICE IT

EARNINGS GREW 16%, A SOLID SHOWING AFTER LAST PERIOD'S 27% GAIN. CARS AND COMPUTERS THRIVED, WHILE AIRLINES AND INSURERS FALTERED

" in the first quarter, says econo- David H. Resler of Nomura Secu- International Inc. That means prof- ill likely grow at a less breathless in the year ahead (page 94).

ıe, U. S. companies continued to some advantages from restructur- the first quarter: Net profit mar- spurted to 5.5%, up from 5.1% a ago. But that wasn't the engine powered the quarter's profit th. Instead, stronger sales growth lot to do with stoking the bottom ıs steady economic growth helped r consumer confidence. A healthier ite for big-ticket items, such as and appliances, helped fuel the st increase in sales since the 10% in the fourth quarter of 1990. all sales for the 900 companies on Scoreboard increased 7%, to more $1 trillion, after rising by 5% in of the past two years.

Y MOTORING. Sales would have even stronger if it weren't for the e winter, which hit retailers hard. asn't a fabulous environment for . But for durable goods, consumer ling was up almost 10%," says Mau- F. Allyn, chief economist at Scud- Stevens & Clark Inc. By contrast, ding increased only 2.4% for non- ble items, such as clothing.

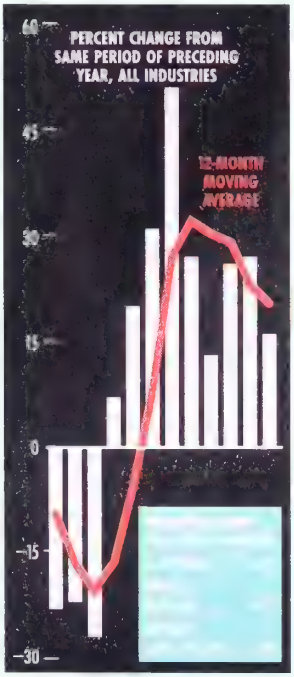
anks largely to a more confident mer, the Big Three auto makers d impressive results in the first er. General Motors Corp. topped st of BUSINESS WEEK's Top 15 earn- leaders during the first quarter. nation's biggest carmaker saw its ts jump by 214%, to $1.6 billion, red by booming sales in North and South America. In all, GM's sales rose by 8%, to $37 billion.

Likewise, Chrysler Corp.'s profits surged 77% from a year ago, to $938 million, thanks to strong sales of pick- ups, minivans, and sport-utility vehicles. Meanwhile, thanks to fewer consumer incentives and stronger truck sales, earnings at Ford Motor Co. increased 58%, to $904 million—its best results since 1989's second quarter. Sales at Chrysler and Ford were up 21% and 14%, respectively.

As a group, computer makers also scored big gains, due in large part to IBM. For the second straight quarter, Big Blue managed to turn a profit, earn- ing $392 million, compared with a loss of $285 million a year ago. IBM's sales, how- ever, rose by a paltry 2%, to $13.4 bil-

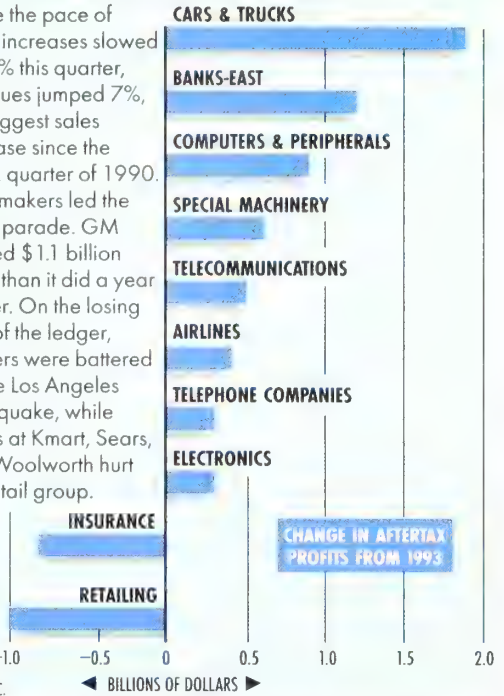
A SPOTLIGHT ON FIRST-QUARTER PROFITS

AFTERTAX PROFITS QUARTER BY QUARTER



While the pace of profit increases slowed to 16% this quarter, revenues jumped 7%, the biggest sales increase since the fourth quarter of 1990. Auto makers led the profit parade. GM earned $1.1 billion more than it did a year earlier. On the losing side of the ledger, insurers were battered by the Los Angeles earthquake, while losses at Kmart, Sears, and Woolworth hurt the retail group.

INDUSTRIES WITH THE BIGGEST DOLLAR CHANGE IN THE QUARTER



DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC.

lion. Profits at Compaq Computer Corp. more than doubled in the first quarter, to $213 million, because of strong demand for personal computers. Compaq's sales hit $2.3 billion, up 41%. By contrast, Apple Computer Inc. had a dismal quarter, partly because of deep discounting to clear out older computers before it introduced its new line of more powerful machines this March. Apple's profits plummeted 84%, to $17.4 million, as sales climbed 5%, to $2 billion.

The quarter had other disappointments as well: The airline industry was the biggest loser after the airfare wars resumed. Passenger traffic was also unusually light during the winter months. USAir Group Inc.'s losses widened to $197 million from $61 million a year ago, as sales slipped 2%, to $1.7 billion. Still, there was one notable bright spot: Southwest Airlines Co., the only consistently profitable carrier over the past five years, saw profits increase 68%, to $41.8 million. Sales for the champion of no-frills, low-fare service rose 24%, to $619 million.

Retail sales and the airlines were hard hit by the bitterly cold winter

Insurers also posted big losses in the wake of January's earthquake in Southern California. At Aetna Life & Casualty Co., profits plunged 67%, to $46 billion. Hardest-hit was Allstate Corp., which went public just last June. The insurer lost $275 million, compared with a $320 million gain a year earlier. Allstate's results were so dismal that the red ink even spilled over to its parent, Sears, Roebuck & Co., which still owns 80% of the insurer. Although Sears' sales were up 9%, to $12.3 billion, the giant retailer posted a loss of almost $98 million, compared with a profit of $317 m lion a year ago. The Allstate loss swamped earnings at Sears' retaili group, which more than doubled, to most $130 million.

Although Sears' core business bounded, that wasn't the case for a other big merchant: Kmart Corp. l $615 million, while sales increased 8%, $10.4 billion. Kmart took a $1.3 billion structuring charge in the quarter d to mounting costs of its store renov tions. Still, there was some positi news among retailers: Profits at J. Penney Co. rose 17%, to $439 milli And Wal-Mart Stores Inc. saw prof climb 16%, to $868 million, while sa were up 19%, to $2 billion. True, that' bit weaker than the year-ago quart when Wal-Mart's sales jumped 26% a profits rose 24%. But for Wal-Mart, for corporate profits as a whole, t slowdown still looks pretty peppy.

By Veronica Byrd in New Yo

THOSE GLORY DAYS MAY BE OVER

For corporate planners hoping the smaller increase in first-quarter profits was just a fluke on the way to another year of 20%-plus earnings gains, the future may be disappointing. As BUSINESS WEEK economists see it, the glory days of double-digit earnings growth may not be around much longer.

Don't panic. Profit growth will still be solid. BUSINESS WEEK projects that corporate operating profits will increase 11% to 12% in both the second and third quarters, down from the first quarter's 16% (chart). That doesn't come close to the 27.5% surge posted in 1993's third quarter—the biggest quarterly gain of this expansion. But the uptrend is certainly on a par with past profit performances at this stage of an upturn.

GOING SHOPPING. What will fuel earnings? A stronger economy will help. Gross domestic product should grow by about 3% this quarter and next. That's nowhere near the 7% advance seen in the final period of 1993. But it's a bit better than the 2.6% pace of the first quarter. Even the recent jump in interest rates shouldn't drag down overall spending. Demand for housing and consumer durables, such as cars and appliances, will probably start to slow after this quarter. But with disposable incomes still rising, consumers will simply spend more on services and nondurable items, such as clothing, entertainment, and travel.

Corporate purchasing will also help maintain sales growth. Most companies have not scaled back spending plans even in the face of rising rates. That's because financial officers can use their companies' own cash instead of tapping into credit lines. Given the profit gain, internally generated cash should rise by about 5% this year, the same as in 1993. Companies can also count on a sales lift from Europe as economies there grow stronger in the second half. As in 1993, total corporate sales will likely increase a solid 5%, split about equally betwee volume and price increases.

Improving productivity wi also help profit margins. Unlik the past, though, companies ca no longer hold production level steady and lay off employees t lift output per hour worke That strategy works only in th early part of an expansion when companies have a lot slack in their workforce and ca pacity. Now that demand is ris ing at a healthy pace, manager will have to use technology an streamlined production proces es to increase output with th same or a slightly higher num ber of workers. Productivit should improve by 1.2% to 1.5% thi year. That's lower than the 1.7% rise i 1993, but it's far better than the 0.9% averaged in the 1980s.

For now, labor costs shouldn't crim profits. With unemployment relativel high, at around 6.5%, workers haven made big wage demands. Wages an benefits in private industry rose 3.3% in the year ended in the first quarte the smallest gain in seven years. But the jobless rate dips below 6%, as ex pected by yearend, a push for bigge pay raises may emerge. If so, profit may rise only 6% in the last quarter- making the first-quarter gain look lot less disappointing.

By Kathleen Madigan in New Yor

CORPORATE SCOREBOARD

FIRST QUARTER 1994

OSSARY

s: Includes all sales and other operating nues. For banks, includes all operating nues.

its: Net income before extraordinary items discontinued operations. For banks, profits et income after security gains or losses.

gins: Net income before extraordinary as percent of sales.

rn on invested capital: Ratio of net in- before extraordinary items and discontinued operations, plus minority interest and interest expenses adjusted by tax rate (all for most recent 12 months), to latest available total funds invested in company.

Return on common equity: Ratio of net income available for common stockholders (most recent 12 months) to latest available common equity, which includes common stock, capital surplus, and retained earnings.

Price-earnings ratio: Based on Apr. 22 stock price and earnings for latest 12 months.

Growth in common equity: Annual percentage growth in common equity for latest 5-year period.

Growth in earnings per share: Annual percentage growth in earnings per share, including all common-stock equivalents, for latest 5-year period.

Market value: Latest available shares outstanding times stock price on Apr. 22, 1994.

Earnings per share: For latest 12 months; includes all common-stock equivalents.

MPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL.	12 MONTHS' EARNINGS PER SHARE
-INDUSTRY MPOSITE	**1045997.8**	**7**	**57962.6**	**16**	**5.5**	**5.1**	**8.9**	**12.5**	**19**	**4**	**3**	**3495284**	**1.84**
EROSPACE & DEFENSE													
USTRY COMPOSITE	**22637.7**	**1**	**957.2**	**8**	**4.2**	**3.9**	**11.0**	**14.3**	**12**	**3**	**8**	**42955**	**3.89**
eing	6345.0	-5	292.0	-10	4.6	4.9	10 5	13.5	12	11	20	14881	3.56
nCorp (1)	401.7	0	-3.2	NM	NM	1.5	8.6	14 3	13	9	4	432	1.06
neral Dynamics	800.0	-7	55.0	-18	6.9	7.8	18.9	21.9	10	-7	-1	2495	4.08
kheed	3025.0	21	92.0	21	3.0	3.0	10.9	17 9	9	0	40	3856	6.93
rtin Marietta	2034.3	74	184.6	142	9.1	6.5	14 6	26.6	9	10	7	4259	5.20
Donnell Douglas	2953.0	-18	134.0	-25	4.5	4.9	7.7	8.9	14	1	7	4488	8.00
rthrop	1218.0	-4	52.0	0	4.3	4.1	7.5	7.3	19	-8	-28	1804	1.98
nr (5)	241.2	-30	1.7	NM	0.7	NM	NM	-7.5	NM	-9	NA	149	-0.80
ndstrand	324.3	-5	17.8	-29	5.5	7.4	14.6	16 3	19	0	-7	1547	2.40
eflex	191.1	21	10.0	16	5.2	5.4	9.3	13.0	17	15	5	592	2.02
okol (6)	266 1	-4	15.4	0	5.8	5 6	15.1	16.8	8	NA	NA	465	3.16
ited Technologies	4838.0**	-1	106.0	66	2.2	1.3	12.6	13.5	17	-8	-8	7988	3.82
UTOMOTIVE													
USTRY COMPOSITE	**93947.6**	**12**	**3941.7**	**102**	**4.2**	**2.3**	**14.6**	**23.5**	**12**	**-15**	**-20**	**110590**	**3.52**
RS & TRUCKS													
OUP COMPOSITE	**83473.1**	**12**	**3516.2**	**114**	**4.2**	**2.2**	**15.4**	**28.3**	**12**	**-17**	**-7**	**88667**	**4.59**
rysler	13223.0**	21	938.0	77	7.1	4.9	25.6	40.1	6	-1	12	17244	7.75
d Motor	30402.0	14	904.0	58	3.0	2.1	10 3	16 5	11	-8	-15	27757	5.19
neral Motors	37495.4**	8	1611.8	214	4.3	1.5	22.7	57.5	16	-34	NA	40056	3.57
vistar International (2)	1128.0	10	16.0	700	1.4	0.2	NM	52.9	NM	-18	NA	1472	-8 99
hkosh Truck (3)	192.9	25	2.8	40	1.4	1.3	8.9	7.6	9	-1	-22	78	1.01
ccar	1031.9	29	43.6	59	4.2	3.4	NA	14.3	13	3	-13	2059	4 08
RTS & EQUIPMENT													
OUP COMPOSITE	**7235.4**	**15**	**283.1**	**49**	**3.9**	**3.0**	**0.9**	**-5.0**	**15**	**-1**	**-7**	**13755**	**-0.63**
vin Industries	479.2	6	5.1	-9	1 1	1.2	6.9	9.3	15	3	22	597	1.78
rg-Warner Automotive	287.2	20	13.7	328	4.8	1.3	9.0	9 4	14	NA	NA	588	1.86
mmins Engine	1099.2	5	54.6	33	5.0	3.9	22.2	26.8	8	2	NA	1588	5.21
na	1596.7**	21	47.7	103	3.0	1.8	14 9	19 1	17	-6	-18	2651	3.24
troit Diesel	405.3	10	8.4	115	2.1	1.1	11 0	11 7	22	NA	NA	627	1.28
gle-Picher Industries (1)	177.8	21	11.0	72	6.2	4.4	NM	NM	NA	NA	NA	NA	NM
ron	1371.0	26	74.0	40	5.4	4 9	14 5	14.0	19	-2	-8	3779	2.82
lin (4)	497.2	13	21.8	33	4.4	3.7	10.7	14.0	14	2	8	1461	1.78
cel Industries	152.0	19	5.1	50	3.4	2.7	11 5	13.3	14	18	15	190	1.32
deral-Mogul	460.3	12	15.0	100	3.3	1 8	8.0	7.6	22	10	-7	990	1.29
ith (A. O.)	339.8	15	15.7	21	4.6	4 4	10.2	15.9	13	NA	3	590	2.21
ndard Motor Products	147.1	15	2.7	-4	1.9	2.2	8 6	10.4	11	3	6	200	1.40
ndard Products (6)	222.7	11	8.2	-19	3.7	5 1	10.5	13.5	16	6	-2	495	1.89
E & RUBBER													
OUP COMPOSITE	**3239.1**	**5**	**142.5**	**27**	**4.4**	**3.6**	**18.3**	**21.6**	**13**	**4**	**14**	**8169**	**2.69**
oper Tire & Rubber	329.1	18	26.5	5	8.1	9.0	16.6	18.1	22	16	20	2299	1.24
odyear Tire & Rubber	2910.0	3	116.0	33	4.0	3.1	18 6	22.5	11	2	2	5870	3.50

st quarter ended Feb. 28. (2) First quarter ended Jan. 31. (3) Second quarter ended Mar. 31. (4) Second quarter ended Feb. 28. (5) Second quarter ended Jan. 31. (6) Third quarded Mar. 31. (7) Third quarter ended Feb. 28. (8) Third quarter ended Jan. 31. (9) Fourth quarter ended Mar. 31. (10) Fourth quarter ended Feb. 28. (11) Fourth quarter ended 1. *Sales include excise taxes. **Sales include other income. ***Sales include excise taxes and other income. †Revenues from some major subsidiaries are not included in consolisales; parent's share of earnings is included in profits. NA = not available. NM = not meaningful. Earnings per share are for latest 12 months, not necessarily for end of most recent year; they include all common-stock equivalents but exclude extraordinary items.

DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC.

CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL.	12 MONTHS EARNING PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
3 BANKS													
INDUSTRY COMPOSITE	**56187.3**	**5**	**7085.3**	**35**	**12.6**	**9.8**	**14.9**	**15.9**	**9**	**15**	**10**	**242127**	**4.20**
(a) **BANKS - EAST**													
GROUP COMPOSITE	**29793.8**	**8**	**3148.0**	**65**	**10.6**	**6.9**	**18.2**	**16.5**	**8**	**10**	**3**	**92001**	**4.81**
Bank of Boston	3054.9	110	103.1	73	3.4	4.1	26.4	12.5	9	3	-2	2645	2.67
Bank of New York	976.0	2	178.0	33	18.2	14.0	NA	15.6	9	17	1	5043	6.22
Bankers Trust New York	1716.0	-2	164.0	-29	9.6	13.1	23.5	22.9	6	7	7	5531	11.66
Chase Manhattan	2935.0	4	364.0	NM	12.4	NM	NA	15.5	6	9	-29	6220	6.12
Chemical Banking	3021.0	-1	319.0	-6	10.6	11.1	NA	14.7	6	31	-16	9104	5.55
Citicorp	8234.0	4	609.0	65	7.4	4.7	19.9	18.2	9	2	2	14445	4.35
CoreStates Financial	546.6	2	91.9	22	16.8	14.0	12.6	17.7	9	12	4	3094	2.94
First Empire State	205.6	-2	27.6	14	13.4	11.6	17.9	14.9	10	12	20	948	14.33
First Fidelity Bancorporation	617.8	3	108.9	18	17.6	15.4	13.7	15.6	10	13	57	3725	4.78
Fleet Financial Group	1067.2	-5	133.1	25	12.5	9.5	NA	16.3	12	7	-14	5067	3.15
Integra Financial	278.0	-2	46.8	17	16.8	14.1	12.5	15.5	10	12	23	1602	4.71
Mellon Bank	860.0	8	131.0	285	15.2	4.3	NA	14.5	9	24	17	3618	6.09
Meridian Bancorp	282.3	-3	40.5	34	14.4	10.4	13.0	14.1	11	12	5	1741	2.78
Midlantic	252.3	-3	53.4	NM	21.1	NM	NM	18.3	8	-10	-39	1559	3.84
Morgan (J. P.)	2831.0	-2	345.0	-20	12.2	15.0	26.2	17.3	8	13	11	11971	8.01
PNC Bank	1153.7	7	205.7	10	17.8	17.4	8.5	17.6	9	12	10	6689	3.22
Republic New York	588.9	3	79.8	16	13.5	12.0	8.0	13.0	9	15	65	2589	5.40
Shawmut National	475.2	0	66.8	NM	14.1	NM	NA	19.2	7	-1	NA	2076	3.32
State Street Boston	440.7	23	51.3	20	11.6	11.9	24.2	17.1	16	17	14	2940	2.47
UJB Financial	257.6	-5	29.1	76	11.3	6.1	10.4	9.0	16	4	-18	1394	1.65
(b) **BANKS - MIDWEST**													
GROUP COMPOSITE	**11370.7**	**1**	**1806.0**	**17**	**15.9**	**13.8**	**14.1**	**17.0**	**10**	**18**	**7**	**70087**	**3.26**
Banc One	1859.5	2	312.9	17	16.8	14.7	15.4	16.9	10	28	14	14028	3.33
Boatmen's Bancshares	536.2	7	85.6	8	16.0	15.8	15.0	15.6	10	17	19	3332	3.12
Comerica	567.3	2	90.9	9	16.0	14.9	NA	16.0	9	27	7	3202	2.95
Continental Bank	420.0	-5	63.0	3	15.0	13.8	NM	14.7	8	7	-2	1770	4.18
Fifth Third Bancorp	253.0	9	54.8	23	21.7	19.3	16.2	17.3	15	17	14	3116	3.42
First Bank System	544.3	-3	98.5	27	18.1	13.8	11.6	14.8	13	20	7	3774	2.62
First Chicago	1180.5	3	193.8	8	16.4	15.6	20.3	21.8	6	10	-4	4547	8.86
First of America Bank	439.0	2	58.3	0	13.3	13.1	15.8	15.9	9	22	4	2217	4.19
Firstar	297.8	0	53.2	6	17.9	16.8	18.1	17.7	11	20	7	2172	3.20
Huntington Bancshares	362.9	0	66.7	22	18.4	15.0	16.5	19.1	10	16	12	2539	2.41
KeyCorp	1271.5	0	208.6	10	16.4	15.0	NA	NA	11	NA	NA	7730	2.97
Mercantile Bancorporation	248.9	-5	38.9	18	15.6	12.6	14.4	15.3	7	16	77	1899	5.10
Michigan National	211.9	-5	18.3	NM	8.6	NM	NM	10.6	11	6	-25	992	5.75
National City	683.6	4	103.8	9	15.2	14.5	15.5	15.5	11	14	3	4307	2.47
NBD Bancorp	733.9	-10	122.9	7	16.7	14.2	14.2	15.1	9	18	4	4540	3.04
Northern Trust	333.4	8	45.4	13	13.6	13.0	11.8	17.0	14	18	7	2252	3.05
Norwest	1426.9	8	190.5	20	13.4	12.0	10.5	20.7	12	25	15	7670	2.23
(c) **BANKS - SOUTH & SOUTHEAST**													
GROUP COMPOSITE	**8052.3**	**11**	**1218.1**	**24**	**15.1**	**13.5**	**14.5**	**15.1**	**10**	**21**	**7**	**45691**	**4.05**
AmSouth Bancorporation	259.7	5	41.3	10	15.9	15.1	15.2	14.1	10	15	9	1578	3.12
Barnett Banks	743.3	-8	118.0	28	15.9	11.5	NA	16.1	11	12	-3	4493	4.35
Crestar Financial	280.5	7	40.5	31	14.4	11.8	NA	13.9	12	10	-8	1707	3.92
First Alabama Bancshares	207.5	25	33.2	21	16.0	16.5	NA	13.8	11	9	11	1416	3.08
First Union	1443.3	5	222.5	11	15.4	14.6	NA	15.8	9	22	12	7623	4.83
NationsBank	3091.5	29	417.0	48	13.5	11.8	13.4	14.5	10	40	4	14121	5.42
Signet Banking	318.0	18	53.1	39	16.7	14.2	21.2	19.6	12	6	2	2250	3.31
SouthTrust	283.0	8	40.7	17	14.4	13.3	12.9	14.9	10	19	12	1538	1.99
SunTrust Banks	746.1	-4	127.1	10	17.0	14.9	13.9	13.4	12	13	9	5695	3.91
Wachovia	679.3	-1	124.8	3	18.4	17.6	19.2	16.4	11	15	8	5270	2.85
(d) **BANKS - WEST & SOUTHWEST**													
GROUP COMPOSITE	**6970.5**	**-4**	**913.1**	**10**	**13.1**	**11.4**	**9.6**	**13.5**	**10**	**21**	**3**	**34348**	**5.08**
Bancorp Hawaii	229.6	1	34.4	4	15.0	14.2	16.9	14.3	7	19	8	1300	4.66
BankAmerica	3816.0	-5	513.0	6	13.4	12.1	8.5	12.3	9	33	10	15748	4.87
First Interstate Bancorp	985.7	0	184.1	54	18.7	12.1	14.2	18.2	10	10	NA	5857	7.51
U. S. Bancorp	451.2	-5	-28.5	NM	NM	13.0	9.1	9.3	16	12	10	2512	1.56
Union Bank	293.1	-10	8.1	-65	2.8	7.1	7.1	5.3	16	9	11	949	1.64
Wells Fargo	1195.0	-3	202.0	87	16.9	8.8	10.6	17.9	12	10	-21	7981	11.79
4 CHEMICALS													
INDUSTRY COMPOSITE	**31228.6**	**4**	**1857.9**	**17**	**6.0**	**5.3**	**7.4**	**9.6**	**33**	**-2**	**-19**	**127372**	**1.28**
Air Products & Chemicals (3)	858.6	3	73.1	-3	8.5	9.0	7.2	9.6	24	11	0	5328	1.80
Arco Chemical	757.0	-1	45.0	-13	5.9	6.8	9.4	13.1	20	2	-17	4236	2.16
Dexter	233.5	8	9.3	20	4.0	3.6	9.2	11.1	17	0	-3	587	1.46
Dow Chemical	4541.0**	4	173.0	-57	3.8	9.2	6.6	5.1	40	2	-32	16298	1.48
DuPont	9190.0***	1	642.0	30	7.0	5.4	6.1	6.4	53	-7	-24	37013	1.04
Eastman Chemical	983.0	4	56.0	-26	5.7	8.1	8.3	23.3	NA	NA	NA	3480	NA

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CORPORATE SCOREBOARD

MPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL.	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
gelhard	557.7**	14	22.8	3	4.1	4.5	NM	3.2	NM	−5	−15	2447	0.18
yl	234.0	−8	14.0	−33	6.0	8.3	7.1	10.3	17	−2	−11	1317	0.66
ro	283.3	10	11.3	−14	4.0	5.1	12.3	15.7	15	3	−2	765	1.77
eport-McMoRan	449.6	49	23.4	NM	5.2	NM	NM	NA	NM	−28	NA	2572	−0.47
ler (H. B.) (1)	242.5	6	4.0	48	1.7	1.2	9.0	9.2	21	8	9	479	1.64
on	261.3	16	7.0	NM	2.7	NM	5.1	5.6	57	NA	NA	758	0.48
orgia Gulf	192.9	6	12.7	26	6.6	5.6	24.3	NM	26	NA	−36	1126	1.07
odrich (B. F.)	502.4	33	4.9	NM	1.0	NM	4.4	2.4	60	−8	−51	1132	0.74
ace (W. R.)	1076.8	9	38.2	21	3.5	3.2	7.0	9.3	27	−1	−15	3750	1.50
eat Lakes Chemical	448.7	4	66.9	4	14.9	14.9	21.8	21.9	17	21	21	4624	3.86
nna (M. A.)	416.0**	15	8.3	84	2.0	1.2	7.5	8.9	22	−4	−18	843	1.65
rcules	680.0	1	52.3	19	7.7	6.5	13.6	15.8	20	−6	14	4257	5.13
C Fertilizer Group (6)	410.5	84	5.4	NM	1.3	NM	NM	−9.6	NM	−4	NA	1020	−2.06
ctite	159.9	7	18.3	−7	11.4	13.2	19.6	18.7	21	14	10	1410	1.90
orizol	399.7	9	43.3	22	10.8	9.6	12.0	11 6	25	3	−2	2331	1.38
ondell Petrochemical	824.0	−23	22.0	NM	2.7	NM	10.3	NM	58	NA	−69	1960	0.42
nsanto	2001.0	3	194.0	38	9.7	7.3	14.6	19.2	17	−7	−5	9061	4.56
rton International (6)	808.3	25	71.3	48	8.8	7.4	12.7	13.9	25	8	4	4263	3.54
lco Chemical	336.2	−1	33.8	−4	10.1	10.4	19 6	25.6	16	5	8	2257	2.02
Industries	201.8	2	−6.4	NM	NM	NM	NM	NM	NM	NA	NA	324	−1.48
n	604.9	2	15.3	31	2.5	2.0	NM	−19.1	NM	−3	NA	957	−4.35
axair	611.0	3	42.0	27	6.9	5.6	13.3	23.9	16	NA	NA	2353	1.11
hm & Haas	856.0**	4	67.0	16	7.8	7.0	7.0	9.7	30	1	−10	3788	1.87
ulman (A.) (4)	168.1**	4	9.0	15	5.3	4.8	13.1	13.2	23	17	9	955	1.10
ra Industries	259.5**	55	−6.3	NM	NM	NM	12.1	10.5	20	−14	−16	504	0.36
ion Carbide	1126.0	−6	63.0	50	5.6	3.5	9.2	12.3	22	−9	−31	3707	1.12
tco	553.4	0	22.0	17	4.0	3.4	3.4	3.2	62	4	−13	1471	0.47
ONGLOMERATES													
USTRY COMPOSITE	**40936.6**	**8**	**1979.9**	**11**	**4.8**	**4.7**	**13.4**	**17.3**	**17**	**0**	**3**	**145545**	**3.35**
o Standard (3)	1969.4**	32	38.0	29	1.9	2.0	2.6	1.0	NM	7	NA	2647	0.11
iedSignal	2986.0	3	169.0	16	5.7	5.0	18.1	26.8	15	−8	7	9970	2.41
ltec Industries	331.9	−2	20.6	18	6.2	5.1	32.1	NM	19	NA	NA	1308	0.99
l	784.9	23	17.2	54	2.2	1.7	13 3	24.5	17	−18	−17	2088	2.70
neral Electric	14182.0**	10	1068.0	−2	7.5	8.4	15.3	17.1	19	6	6	81950	5.16
neral Host (11)	166.3	1	−41.8	NM	NM	0.4	NA	−36.0	NM	−5	39	126	−2.54
rcourt General (2)	832.2**	3	20.0	−26	2.4	3.3	9.9	17.2	16	0	9	2403	1.99
	5548.0	3	201.0	27	3.6	2.9	9.5	12.1	11	−1	3	10198	7.69
/	1064.9	8	15.3	NM	1.4	NM	62.9	82.3	NA	NA	38	1184	NA
ll (5)	169.7	1	22.0	577	13.0	1 9	17 3	17.9	19	12	8	1881	0.85
tway	176.5	16	18.0	247	10.2	3.4	10.2	11 7	14	12	−9	486	2.44
emark International	801.6	14	37.8	58	4.7	3.4	21.3	22.9	13	0	−15	2305	5.54
ckwell International (3)	2761.0	2	154.7	13	5.6	5.1	16.8	19.8	14	−6	−5	8409	2.72
edyne	572.9	−10	−55.1	NM	NM	5.3	2.0	−5.7	NM	−35	−28	936	−0.29
neco	3286.0	1	122.0	65	3.7	2.3	10.7	18.8	18	−11	NA	8553	2.77
xtron	2408 0	11	100.0	21	4.2	3.8	7.6	14.3	12	NA	6	4664	4.38
W	2159.4	6	64.1	26	3.0	2.5	11.9	15.1	18	−2	−6	4179	3.57
lhi †	188.9	10	−0.7	NM	NM	NM	NM	−2.2	NM	−6	NA	586	0.04
nitman	546.9	5	9.8	17	1.8	1.6	11.8	20.9	16	−13	−14	1673	1.00
ONSUMER PRODUCTS													
USTRY COMPOSITE	**59935.9**	**6**	**4103.3**	**2**	**6.8**	**7.1**	**10.7**	**18.6**	**20**	**10**	**10**	**275370**	**1.64**
PAREL OUP COMPOSITE	**5557.6**	**4**	**183.5**	**−27**	**3.3**	**4.7**	**9.4**	**11.8**	**22**	**10**	**14**	**17913**	**1.48**
own Group (11)	381.9	6	−30.5	NM	NM	2.0	NM	−2.9	NM	−6	NA	659	−0.39
rtmarx (1)	177.9	−5	−0.7	NM	NM	NM	9.1	6.2	29	−27	NA	204	0.22
nes Apparel Group	161.7	11	14.8	15	9.1	8.9	27.1	27.8	17	NA	NA	829	1.91
llwood (8)	251.6	7	3.5	42	1.4	1.0	10.7	11 6	15	11	−7	505	1.66
Claiborne	541.4	2	27.4	−33	5.1	7.7	11 4	11 4	19	17	6	2050	1.39
ke (7)	871.8	−10	63.2	−29	7.3	9.2	18.0	17 7	13	32	27	4018	4.03
ne West Group	150.7	25	11.3	188	7 5	3.2	27.2	34.3	18	NA	NA	1006	1.66
xford Industries (7)	143.1	2	4.5	29	3.1	2.5	13.3	14.4	15	2	18	264	2.07
illips-Van Heusen (11)	309.1	13	13.2	36	4.3	3.5	NA	18.1	21	51	17	871	1.60
ebok International	857.4	4	65.8	−3	7.7	8.2	24.6	26.2	12	2	11	2542	2.56
ssell	232.1	13	13.4	−17	5.8	7.8	7.0	7.9	25	11	0	1152	1.14
	1123.0	10	52.9	0	4.7	5.2	13.5	15.3	13	9	12	3257	3.78
estPoint Stevens	355.8	3	−55.2	NM	NM	NM	NM	NM	NM	NA	NA	557	−9.64
PLIANCES & HOME FURNISHINGS OUP COMPOSITE	**8494.4**	**21**	**339.9**	**116**	**4.0**	**2.2**	**11.4**	**14.0**	**20**	**7**	**−8**	**18399**	**1.33**
mstrong World Industries	642.7	5	48.0	325	7.5	1.8	11.3	14.8	23	−13	−21	1968	2.29
st Buy (10)	1193.2	94	21.4	99	1.8	1.8	9.0	13.4	35	27	41	1465	1.01
rcuit City Stores (10)	1406.7	28	67.7	11	4.8	5.5	20.5	20.7	14	21	10	1788	1.36
od Guys (3)	159.9	37	2.8	691	1.7	0.3	10.8	10.8	17	39	4	207	0.95

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4/22 $ MIL	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4/22	COMMON EQUITY %	EARNINGS PER SHARE %		
Heilig-Meyers (10)	241.9**	33	14.3	49	5.9	5.3	9.6	12.7	24	17	13	1307	1.12
Kimball International (6)	208.6	15	8.7	-4	4.2	5.0	10.4	10.8	15	8	-2	534	1.74
La-Z-Boy Chair (8)	192.6	13	8.0	25	4.1	3.8	10.6	12.1	16	8	-1	559	1.87
Leggett & Platt	434.6	20	26.0	33	6.0	5.4	13.6	17.9	18	16	13	1593	2.24
Maytag	790.6	10	31.0	NM	3.9	NM	10.2	15.2	21	-2	-23	1961	0.87
Pier 1 Imports (10)	181.9	10	6.4	21	3.5	3.2	NA	10.5	14	15	0	305	0.60
Sun TV & Appliances (10)	204.0	39	7.1	29	3.5	3.8	12.3	13.0	9	NA	NA	151	0.96
Sunbeam-Oster	318.5	10	27.5	15	8.6	8.2	15.7	19.9	17	10	NA	1392	1.09
Toro (5)	189.4	24	4.5	146	2.4	1.2	11.6	12.2	18	11	-15	318	1.42
Whirlpool	1870.0	3	67.0	272	3.6	1.0	14.1	17.0	14	4	8	3964	3.84
Williams-Sonoma (11)	162.7	26	11.4	48	7.0	6.0	12.4	11.8	51	28	-12	564	0.66
Zenith Electronics	297.1	2	-11.9	NM	NM	NM	NM	-57.2	NM	-20	NA	323	-2.59
(c) **BEVERAGES**													
GROUP COMPOSITE	**14045.1**	**9**	**1067.1**	**11**	**7.6**	**7.5**	**13.4**	**27.6**	**22**	**8**	**NM**	**101540**	**1.76**
Anheuser-Busch	2627.6	5	204.4	5	7.8	7.8	8.5	14.2	24	9	1	14387	2.22
Brown-Forman (8)	348.5	-1	38.8	4	11.1	10.5	25.3	37.1	15	12	10	2081	5.95
Coca-Cola	3352.0	10	521.0	15	15.5	14.9	38.8	49.2	23	8	19	51898	1.73
Coca-Cola Bottling Consolidated	163.8	6	1.5	12	0.9	0.9	6.2	50.6	17	-32	NA	258	1.61
Coca-Cola Enterprises	1320.0	9	-6.0	NM	NM	NM	-0.2	-1.4	NM	-4	NA	2244	-0.13
Coors (Adolph)	318.5	8	6.9	49	2.2	1.6	NM	-6.3	NM	-11	NA	707	-1.04
Dr Pepper/Seven-Up	185.7	9	17.7	-2	9.5	10.5	36.3	NM	18	NA	NA	1509	1.41
PepsiCo	5728.9	13	282.8	9	4.9	5.1	12.5	26.0	18	14	14	28457	1.99
(d) **PERSONAL CARE**													
GROUP COMPOSITE	**12908.7**	**4**	**910.7**	**2**	**7.1**	**7.1**	**12.0**	**15.0**	**35**	**10**	**2**	**71987**	**1.60**
Avon Products	913.6	9	29.5	20	3.2	2.9	57.1	81.1	17	7	13	4281	3.53
Clorox (6)	481.9	11	49.5	6	10.3	10.7	15.0	20.1	16	3	-2	2715	3.26
Colgate-Palmolive	1770.0	4	149.6	6	8.5	8.3	16.6	28.9	17	16	17	8657	3.51
Ecolab	260.1	8	15.8	25	6.1	5.2	19.2	21.1	18	-4	37	1388	1.26
Gillette	1361.1	12	164.0	15	12.1	11.7	19.4	31.0	33	118	12	14717	2.02
Helene Curtis Industries (10)	338.7	1	6.4	-11	1.9	2.2	5.0	7.3	16	13	5	242	1.51
NCH (8)	170.6	1	5.7	-25	3.4	4.5	10.8	11.1	16	10	6	503	3.81
Procter & Gamble (6)	7441.0	1	482.0	-4	6.5	6.8	7.4	5.9	81	5	-20	38845	0.70
Stanhome	171.8	4	8.1	30	4.7	3.8	14.2	13.8	19	11	-2	640	1.78
(e) **TOBACCO**													
GROUP COMPOSITE	**18930.1**	**0**	**1602.2**	**-10**	**8.5**	**9.4**	**8.6**	**17.6**	**15**	**12**	**14**	**65530**	**1.64**
American Brands	2032.9	-3	149.2	-40	7.3	11.8	10.4	13.4	11	12	6	6405	2.82
Culbro (1)	317.8***	11	-0.8	NM	NM	NM	3.1	1.7	37	-2	19	60	0.38
Philip Morris	12727.0	1	1171.0	-4	9.2	9.7	14.4	29.3	13	9	15	46486	4.02
RJR Nabisco Holdings	3572.0	-4	194.0	-8	5.4	5.6	-0.1	-1.5	NM	27	NA	7255	-0.08
UST	280.4*	6	88.8	-14	31.7	39.1	69.3	76.5	16	1	20	5324	1.65
7 **CONTAINERS & PACKAGING**													
INDUSTRY COMPOSITE	**5031.0**	**5**	**125.0**	**-9**	**2.5**	**2.9**	**2.2**	**2.2**	**94**	**9**	**NM**	**14320**	**0.23**
(a) **GLASS, METAL & PLASTIC**													
GROUP COMPOSITE	**2369.5**	**4**	**72.2**	**18**	**3.0**	**2.7**	**0.8**	**-2.2**	**NM**	**17**	**NA**	**5272**	**-0.19**
Ball	587.3	10	10.5	15	1.8	1.7	NM	-6.3	NM	9	NA	769	-1.16
Crown Cork & Seal	943.0	3	33.6	14	3.6	3.2	11.3	14.8	17	14	14	3164	2.11
Owens-Illinois	839.2	1	28.1	24	3.3	2.7	NM	-72.8	NM	39	NA	1339	-1.66
(b) **PAPER**													
GROUP COMPOSITE	**2661.6**	**6**	**52.8**	**-30**	**2.0**	**3.0**	**3.0**	**4.0**	**46**	**6**	**-13**	**9048**	**0.47**
ACX Technologies	161.6	3	3.4	68	2.1	1.3	3.2	3.4	30	NA	NA	425	1.12
Bemis	323.3	10	13.6	26	4.2	3.7	10.1	13.2	25	10	5	1184	0.94
Federal Paper Board	319.5	0	3.1	-66	1.0	2.8	2.1	0.9	NM	7	-35	880	0.20
Gaylord Container (3)	182.5	1	-22.6	NM	NM	NM	NM	NM	NM	-20	NA	244	-1.70
Longview Fibre (2)	166.1	7	1.8	-65	1.1	3.3	6.1	9.4	24	2	-19	888	0.71
Riverwood International	264.9	3	2.5	-57	0.9	2.3	0.0	0.0	NM	NA	NA	1032	0.00
Sonoco Products	537.4	15	28.1	4	5.2	5.8	10.9	19.0	15	6	3	1815	1.34
Temple-Inland	706.3	3	22.9	-18	3.2	4.1	3.6	3.7	42	9	-18	2580	1.12
8 **DISCOUNT & FASHION RETAILING**													
INDUSTRY COMPOSITE	**110021.1**	**9**	**3033.3**	**-25**	**2.8**	**4.0**	**9.3**	**12.4**	**23**	**8**	**2**	**215919**	**1.15**
Ames Department Stores (11)	665.4**	-11	40.4	NM	6.1	NM	NA	16.4	10	-38	NA	77	0.47
AutoZone (4)	303.2	25	20.9	31	6.9	6.6	21.2	21.6	42	64	44	3947	0.66
Baker (J.) (11)	268.5	76	8.0	62	3.0	3.2	NA	12.2	12	41	2	276	1.70
Barnes & Noble (11)	483.7	19	27.1	15	5.6	5.8	4.4	2.6	77	NA	NA	682	0.30
Bradlees (11)	597.2	2	27.5	-11	4.6	5.2	5.6	8.2	12	NA	NA	164	1.19
Caldor (11)	858.5	14	37.8	4	4.4	4.8	10.8	14.2	12	NA	NA	486	2.50
Carson Pirie Scott (11)	387.7**	NA	27.2	NA	7.0	NA	NA	NA	NA	NA	NA	323	NA
Carter Hawley Hale Stores (11)	705.6**	-4	-18.0	NM	NM	3.8	NA	-21.5	NM	NA	NA	502	2.30
Charming Shoppes (11)	357.2	6	23.8	-8	6.7	7.7	14.2	15.2	16	18	12	1181	0.70
Consolidated Stores (11)	349.6	14	28.3	21	8.1	7.7	NA	18.9	19	9	10	813	0.90
Dayton Hudson (11)	6281.0**	6	278.0	12	4.4	4.2	9.1	13.1	15	9	4	5355	4.99

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CORPORATE SCOREBOARD

MPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
rd Department Stores (11)	1679.0**	6	111.3	1	6.6	7.0	8.8	11.6	16	21	13	3856	2.14
ar General (11)	383.1	31	22.0	32	5.8	5.7	20.1	20.2	27	11	35	1287	0.90
n Brothers Stores (11)	451.8	-4	9.8	-72	2.2	7.6	NA	5.4	29	19	12	638	1.01
Distributors (11)	186.9	-2	1.8	-60	1.0	2.4	5.7	8.1	B	NA	NA	46	0.60
-Centers of America (11)	182.1	-2	10.5	19	5.8	4.8	3.7	4.9	21	25	1	141	0.75
ly Dollar Stores (4)	398.8	12	22.0	6	5.5	5.8	18.1	18.9	13	14	24	848	1.19
rated Department Stores (11)	2347.5**	4	146.0	39	6.2	4.6	5.3	8.6	15	15	NA	1939	1.56
e's Basement (11)	178.1**	12	-7.2	NM	NM	2.8	NM	-3.7	NM	NA	NA	176	-0.20
erhut	362.1	-3	10.0	28	2.8	2.1	13.7	16.4	18	12	15	1304	1.54
(11)	1060.2	14	109.3	66	10.3	7.1	21.6	22.9	26	29	31	6673	1.78
esco (11)	144.3	-4	-48.4	NM	NM	2.8	NM	-35.0	NM	18	-26	94	-2.16
dy's Family Clothing (11)	174.1	11	8.0	4	4.6	4.9	NA	17.3	20	NA	NA	273	0.86
inger (11)	482.3	16	1.2	-55	0.3	0.7	4.9	5.0	26	9	NA	636	0.59
Stores (11)	627.0	7	32.2	11	5.1	5.0	NA	14.7	9	NA	14	145	2.09
e Depot (11)	2287.4	26	112.7	16	4.9	5.3	NA	17.1	41	52	38	18539	1.01
e Shopping Network	274.2	15	6.7	NM	2.4	NM	NM	4.1	NM	6	NA	1100	0.08
se of Fabrics (11)	147.6	-6	0.2	-90	0.1	1.4	NM	-19.6	NM	15	-5	87	-2.16
esway (11)	216.0	-13	-19.7	NM	NM	NM	NA	-80.2	NM	-9	NA	B	-2.76
rt (11)	10420.0**	8	-615.0	NM	NM	5.2	NM	-6.5	NM	7	5	7356	-0.73
's (11)	457.1	20	28.1	25	6.2	5.9	17.9	21.2	33	NA	NA	1830	1.52
s' End (11)	347.5	24	26.7	26	7.7	7.6	23.3	23.9	19	12	10	821	2.36
ed (11)	2420.8**	0	196.3	-20	8.1	10.0	13.0	16.5	17	26	16	6807	1.08
e's (11)	1145.8	26	25.7	109	2.2	1.4	10.0	15.1	36	5	-12	4803	0.90
Frugal's Bargains (11)	243.7	23	20.4	-12	8.4	11.7	13.0	12.4	14	3	-17	459	1.07
y (R. H.) (5)	1997.2**	-2	60.5	579	3.0	0.4	NM	NM	NA	NA	NA	NA	NM
Department Stores (11)	3707.0**	3	365.0	14	9.8	8.8	12.7	19.0	15	6	9	10120	2.77
ille	2379.8	17	-2.5	NM	NM	NM	15.0	15.0	12	6	-9	4174	3.18
antile Stores (11)	888.1**	-1	56.0	2	6.3	6.1	6.8	6.8	16	8	-8	1405	2.35
y-Go-Round Enterprises (11)	304.1	3	-6.6	NM	NM	4.8	NM	-23.1	NM	38	25	121	-0.85
er (Fred) (11)	807.8	7	30.0	16	3.7	3.4	NA	13.4	16	14	9	1051	2.50
aels Stores (11)	235.6	29	14.0	26	5.9	6.1	11.2	14.2	27	38	43	684	1.53
o Warehouse	156.8	59	5.8	106	3.7	2.8	18.5	18.5	29	NA	NA	535	0.73
nan Marcus Group (5)	650.7**	5	21.5	22	3.3	2.9	7.6	49.7	27	NA	NA	570	0.56
lstrom (11)	1107.4	4	61.0	22	5.5	4.7	10.7	12.0	23	13	4	3180	1.71
ida Holdings (11)	184.1**	10	-0.4	NM	NM	1.1	NM	-35.2	NM	6	-42	24	-0.48
ess Cashways (1)	542.1	10	-0.7	NM	NM	NM	8.6	7.3	24	NA	NA	631	0.65
ey (J. C.) (11)	6478.0	2	439.0	17	6.8	5.9	11.7	17.7	14	d	1	12778	3.79
Boys-Manny, Moe & Jack (11)	296.8	9	15.5	26	5.2	4.5	NA	11.8	28	15	6	1814	1.06
e Stores (11)	437.1	2	-4.7	NM	NM	2.5	NM	-8.1	NM	3	-26	1222	-1.04
/Costco (4)	4101.4**	8	62.3	-10	1.5	1.8	6.2	7.6	23	NA	NA	3210	0.63
Network (11)	372.5**	9	2.8	-86	0.8	5.9	NA	10.0	34	NA	25	1504	1.10
's Stores (11)	379.5**	-18	2.1	NM	0.6	NM	NA	NM	NM	-15	NA	B	-3.53
Stores (11)	344.3	7	12.8	-21	3.7	5.0	11.7	12.8	14	12	18	392	1.14
s, Roebuck	12266.3	9	-97.9	NM	NM	2.8	13.6	19.5	9	-8	15	16314	5.13
ice Merchandise	724.2	8	-12.8	NM	NM	NM	12.9	30.2	9	3	2	733	0.78
oKo Stores (10)	462.6	8	10.2	-41	2.2	4.1	6.5	8.8	11	NA	NA	348	1.02
gel	622.1	24	6.5	126	1.1	0.6	5.9	9.2	45	8	-12	2424	0.50
wbridge & Clothier (11)	338.8**	2	23.3	5	6.9	6.7	6.8	7.0	12	3	-12	214	1.71
ots (11)	218.8	14	5.6	245	2.5	0.8	22.1	31.2	22	NA	NA	1069	1.42
y	992.1**	15	41.8	3	4.2	4.7	10.4	10.6	14	-2	-10	2111	2.44
ny (11)	208.0**	36	18.0	108	8.7	5.7	NM	-5.4	NM	14	NA	458	-0.65
11)	1040.2	4	30.7	5	3.0	2.9	16.6	26.4	14	-14	-6	1716	1.62
'R' Us (11)	3893.5	14	374.6	10	9.6	10.0	14.1	17.2	21	20	14	10020	1.63
Shoe (11)	669.0	-3	8.3	894	1.2	0.1	NM	-3.4	NM	-1	-21	802	-0.35
e City Department Stores (5)	275.4**	3	18.3	1	6.7	6.8	15.2	16.7	14	NA	20	489	1.07
ure Stores (11)	649.4**	13	30.5	-5	4.7	5.6	13.5	16.8	10	4	NA	406	2.43
g Office Products (6)	162.6	30	10.8	67	6.6	5.2	22.9	23.1	35	53	24	973	1.40
an (11)	890.3	-5	-44.9	NM	NM	1.5	NM	-4.4	NM	44	NA	550	-0.56
Mart Stores (11)	20360.5	19	868.0	16	4.3	4.4	14.8	23.5	25	32	25	58325	1.02
lworth (11)	2816.0**	-10	-111.0	NM	NM	5.3	NM	-36.7	NM	4	2	2111	-3.76
kers (11)	185.9**	-11	8.0	-47	4.3	7.3	7.1	8.1	10	NA	NA	146	1.55
CTRICAL & ELECTRONICS													
STRY COMPOSITE	**33895.4**	**13**	**2587.7**	**29**	**7.6**	**6.7**	**14.2**	**16.2**	**16**	**5**	**9**	**138211**	**2.38**
TRICAL PRODUCTS UP COMPOSITE	**7336.5**	**-4**	**355.3**	**-5**	**4.8**	**4.9**	**8.3**	**10.1**	**26**	**0**	**4**	**28061**	**1.14**
tek	199.3	7	8.8	44	4.4	3.3	NM	-5.1	NM	0	NA	494	-0.10
man	175.9**	13	11.4	18	6.5	6.2	NA	15.3	19	NA	NA	712	1.37
per Industries	1316.9**	-10	48.4	-23	3.7	4.3	9.6	10.1	14	8	4	4168	2.63
rson Electric (3)	2116.5	3	194.3	9	9.2	8.6	20.4	21.7	15	7	6	12682	3.81
bell	207.0	5	24.3	1	11.8	12.1	12.3	11.9	29	B	1	1883	2.11
neTek (6)	374.2	-3	1.7	-81	0.5	2.3	NM	-30.1	NM	37	4	347	-1.47
onal Service Industries (4)	439.3	3	16.3	11	3.7	3.4	9.8	10.8	17	4	-7	1320	1.56

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22	12 MONTH EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	$ MIL.	
Raychem (6)	361.3	12	1.1	139	0.3	0.1	1.3	1.3	NM	−1	NA	1444	0.2
Reliance Electric	403.0	4	13.0	8	3.2	3.1	6.2	8.7	27	106	17	917	0.6
Westinghouse Electric	1743 0	−14	36.0	−39	2.1	2.9	NM	−23.9	NM	−22	NA	4094	−0.6
(b) **ELECTRONICS**													
GROUP COMPOSITE	**13694.3**	**16**	**951.9**	**45**	**7.0**	**5.6**	**13.7**	**14.8**	**17**	**5**	**1**	**47761**	**2.5**
E-Systems	495.1	−7	28.1	2	5.7	5.2	16.2	15.9	11	9	8	1381	3.5
General Instrument	432.5	43	52.9	373	12.2	3.7	15.2	33.9	23	−14	NA	2961	2.1
GM Hughes Electronics	3560.8	12	312.5	65	8.8	6.0	13.7	13.9	13	−2	1	2989	2.6
Harris (6)	838.3	13	33.0	20	3 9	3.7	8.7	10.6	14	3	0	1737	3.1
Litton Industries (5)	803.9	7	23.4	27	2.9	2.4	6.6	6.0	7	5	−7	1377	4.4
Motorola	4693.0	29	298.0	46	6.4	5.6	14.8	16.5	24	13	12	25631	1.9
Raytheon	2314.0	5	169.3	7	7.3	7.1	16.8	16.4	12	16	6	8721	5.2
Sensormatic Electronics (6)	162.2	42	16.4	38	10.1	10.4	11.2	12.7	27	21	20	1807	1.1
Varian Associates (3)	394.5	21	18.3	97	4.6	2.9	12.6	14.4	20	−1	18	1156	1.6
(c) **INSTRUMENTS**													
GROUP COMPOSITE	**4305.0**	**8**	**137.1**	**13**	**3.2**	**2.8**	**8.3**	**10.1**	**23**	**0**	**NM**	**10005**	**1.2**
Beckman Instruments	198.6	−2	9.8	−4	4.9	5.1	NM	−12.2	NM	5	NA	689	−1.2
Honeywell	1347.9	−6	47.7	−17	3.5	4.0	15.5	17.6	13	0	−4	4111	2.3
Imo Industries	153.7	−8	0.9	120	0.6	0.2	NM	NM	NM	3	NA	169	−2.3
Johnson Controls (3)	1682.1	16	25.5	34	1.5	1.3	11.2	15.4	14	3	3	1956	3.4
Perkin-Elmer (6)	263.5	NA	20.4	NA	7.7	NA	NA	NA	NA	−18	−9	1229	N
Tektronix (7)	332.8	7	15.5	69	4.7	2.9	NM	−10.4	NM	−2	NA	959	−1.5
Teradyne	152.0	19	13.5	150	8.9	4.2	10.6	10.5	19	8	29	812	1.2
Tracor	174.4	189	3 9	128	2.2	2.8	9.1	17.1	14	−4	NA	80	0.5
(d) **SEMICONDUCTORS**													
GROUP COMPOSITE	**8559.5**	**28**	**1143.3**	**35**	**13.4**	**12.7**	**21.3**	**22.9**	**13**	**14**	**16**	**52385**	**3.4**
Advanced Micro Devices	513.1	26	84.6	38	16.5	15.1	16.2	16.7	10	16	85	2357	2 5
AMP	906.1	8	79.6	10	8.8	8.7	14.1	14.3	21	6	−1	6268	2 9
Amphenol	155.5	6	7.0	91	4.5	2 5	NA	16.9	26	29	NA	682	0.6
Analog Devices (2)	181 1	20	15.3	88	8.4	5.4	10.7	11 5	26	4	−7	1293	1.0
Intel	2660.0	31	617.0	13	23.2	27.1	27.0	29.0	11	29	33	25237	5.3
LSI Logic	193.8	15	19.4	82	10.0	6.3	11.3	19.1	16	−5	NA	1001	1.2
Micron Technology (4)	390.5	121	86.8	860	22.2	5.1	27.8	30.7	14	13	−24	3507	2.4
Molex (6)	238.6	16	23.6	36	9.9	8.5	11 7	10.7	24	14	5	2099	1.4
National Semiconductor (7)	544 7	11	63 8	137	11 7	5.5	20.9	19.7	12	−7	NA	2206	1 6
Solectron (4)	327.2	75	12.4	88	3 8	3.5	12.3	16.1	25	109	33	1094	1.0
Texas Instruments	2449.0	30	134.0	58	5.5	4.5	18.7	20.7	13	3	2	6641	5.5
10 **FOOD**													
INDUSTRY COMPOSITE	**78041.1**	**5**	**2140.2**	**23**	**2.7**	**2.3**	**12.4**	**22.3**	**18**	**9**	**11**	**140298**	**1.4**
(a) **FOOD DISTRIBUTION**													
GROUP COMPOSITE	**12146.3**	**2**	**135.2**	**14**	**1.1**	**1.0**	**8.2**	**11.7**	**19**	**12**	**8**	**9177**	**1.3**
Fleming	4032.0	0	24.4	−35	0.6	0.9	2.9	2.3	37	12	−11	896	0.6
Nash Finch	618.2**	3	2.6	5	0.4	0.4	7.4	8.0	11	6	2	182	1.4
Richfood Holdings (8)	295.2	23	5.0	24	1.7	1.7	14.8	19.6	19	23	61	352	0.8
Rykoff-Sexton (8)	372.7	4	0.4	NM	0.1	NM	3.6	3.3	39	1	NA	219	0.4
Smart & Final	198.9	14	2 6	8	1.3	1.4	NA	13.7	21	NA	NA	309	0 7
Super Food Services (4)	257.4**	−2	2.0	9	0 8	0.7	6.1	7.4	14	6	−10	133	0.8
Supervalu (10)	3687.0	−4	52.6	5	1.4	1.3	9 8	15.1	12	11	11	2285	2.3
Sysco (6)	2684.9	12	45.7	7	1.7	1.8	12.3	17 9	22	17	18	4800	1
(b) **FOOD PROCESSING**													
GROUP COMPOSITE	**33239.4**	**6**	**1500.2**	**21**	**4.5**	**4.0**	**14.8**	**23.5**	**17**	**7**	**11**	**98170**	**1.**
Borden	1272.7	−2	5.8	−87	0.5	3.4	NM	−38.6	NM	−28	NA	1732	−0.6
Campbell Soup (5)	1894.0	6	203.0	NM	10.7	NM	26.2	30.9	17	0	58	10034	2.3
ConAgra (7)	5581.3	10	103.7	14	1.9	1.8	12.3	18.1	17	25	12	7193	1.4
CPC International	1737 7	6	98.1	9	5 6	5.5	19.6	26 1	16	8	10	7229	3.0
Curtice-Burns Food (6)	189.5	−10	1.7	134	0.9	0.3	NM	−22 8	NM	−1	NA	127	−2.
Dean Foods (7)	622.9	10	18.4	16	3.0	2.8	11.1	13.1	17	13	8	1104	1.4
Dekalb Genetics (4)	143.0	9	5.7	20	4.0	5.4	NM	1 9	82	3	-13	161	0.4
Dole Food	818.8	7	29.7	−44	3.6	6.9	4.3	5.2	31	7	−9	1702	0.5
Flowers Industries (6)	221.7	5	7.4	−4	3.3	3.6	10.5	14 0	17	5	−2	644	1.1
General Mills (7)	2101.4	5	145 0	3	6.9	7.0	18.2	44.5	16	17	16	8277	3.1
Heinz (H. J.) (8)	1710.2	−3	128.6	-21	7.5	9.2	15.0	23.4	16	9	9	8339	2.1
Hershey Foods	883 9	−2	53.0	−50	6.0	11.7	15.1	17.4	16	8	14	3964	2.1
Hormel Foods (2)	716.2	5	20.6	12	2.9	2.7	17.7	17.7	14	8	11	1456	1.4
Hudson Foods (3)	256.3	16	4.4	135	1.7	0.8	8.2	11.3	12	13	−3	231	1.1
IBP	2819.4	3	20.9	69	0 7	0.4	9.6	13.7	14	4	−2	1211	1.1
Interstate Bakeries (7)	336.3	2	-2 5	NM	NM	1.5	6.3	10.2	13	NA	NA	242	0.
International Multifoods (10)	561 8	5	−5.1	NM	NM	2.0	NM	−5.2	NM	−1	8	308	−0.1
Kellogg	1611 2	6	183.9	3	11 4	11 8	29.2	40.0	17	4	11	11738	2.1
McCormick (1)	367.7	8	18.3	6	5.0	5.1	14 0	21 1	17	9	26	1709	1.1
Pet (6)	420.4	6	30 8	2	7.3	7.6	17.2	36.9	15	-21	NA	1780	1.1

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CORPORATE SCOREBOARD

MPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL	12 MONTHS' EARNINGS PER SHARE
rim's Pride (3)	223.2	−2	7.9	1	3.5	3.4	11.1	16.2	10	13	−2	231	0.87
heer Hi-Bred International (4)	250.0	60	16.2	NM	6.5	NM	20.9	21.4	19	8	21	3043	1.80
ker Oats (6)	1449.2	7	73.8	−4	5.1	5.7	27.5	68.0	15	−14	5	4349	4.32
ston Purina Group (3)	1997.7	4	72.4	−12	3.6	4.3	15.4	51.1	15	NA	−1	3825	2.53
a Lee (6)	3664.0	11	152.0	0	4.1	4.6	13.2	19.4	14	18	16	10047	1.47
thfield Foods (8)	429.0	26	11.7	NM	2.7	0.2	8.0	8.2	31	31	−14	358	0.72
rn Apple Valley (7)	173.3	5	3.0	−1	1.7	1.8	NA	12.3	12	26	54	136	1.94
versal Foods (3)	237.1	9	14.6	9	6.1	6.2	12.9	19.3	15	12	10	849	2.24
R Foods (6)	171.1	14	1.3	3	0.8	0.8	8.8	10.3	23	9	14	347	1.40
gley (Wm.) Jr.	378.6	14	75.9	79	20.1	12.7	35.0	36.2	28	13	15	5805	1.79
D RETAILING													
UP COMPOSITE	**32655.5**	**4**	**504.9**	**31**	**1.5**	**1.2**	**9.5**	**24.5**	**20**	**12**	**14**	**32951**	**0.82**
ertson's (11)	3062.0	14	127.0	20	4.1	3.9	17.8	24.4	21	12	16	7190	1.34
erican Stores (11)	4870.6	0	101.7	7	2.1	2.0	8.6	15.0	14	15	16	3633	1.85
ey's General Stores (8)	173.8*	9	4.0	29	2.3	2.0	8.2	13.0	16	11	9	259	0.72
champs (6)	265.1	8	3.6	1	1.3	1.4	9.3	10.3	11	13	0	146	1.91
le Food Centers (11)	269.5	−2	−10.5	NM	NM	0.9	NA	−8.6	NM	8	NA	58	−0.55
d Lion	1804.0	9	31.2	42	1.7	1.3	3.2	1.4	NM	18	−37	2721	0.02
darama Supermarkets (2)	157.5	−9	0.0	−67	0.0	0.1	NM	−7.2	NM	0	NA	14	−1.94
eral Nutrition (11)	177.9	19	10.3	447	5.8	1.3	12.3	20.0	31	NA	NA	886	0.77
nt Food (10)	1159.1	4	36.3	−1	3.1	3.3	NA	13.2	15	13	1	1327	1.53
at Atlantic & Pacific Tea (10)	2362.5	−1	−19.4	NM	NM	NM	2.4	0.4	NM	5	NA	889	0.10
nnaford Brothers	519.1**	6	11.0	14	2.1	2.0	10.5	14.0	17	18	10	958	1.36
ger	5328.8	3	55.7	89	1.0	0.6	23.4	NM	13	NA	43	2422	1.79
ional Convenience Stores (6)	204.7	NA	−1.5	NA	NM	NA	7.5	10.9	13	−1	NA	95	1.24
n Traffic (11)	845.3**	13	7.6	84	0.9	0.6	3.9	46.9	51	NA	NA	422	0.76
dick (3)	465.9	12	7.4	−7	1.6	1.9	8.1	9.9	16	15	6	428	1.17
eway	3491.8	3	41.9	NM	1.2	NM	10.4	43.6	18	NA	80	2525	1.37
th's Food & Drug Centers	753.8	10	9.4	−33	1.2	2.0	5.1	7.5	14	26	8	575	1.37
thland	1528.9***	−4	−8.1	NM	NM	NM	−0.3	NM	NM	NA	NA	1922	0.01
& Shop (11)	870.4	7	18.8	21	2.2	1.9	8.8	41.2	20	−7	−6	1227	1.23
ge Super Market (5)	176.7	1	0.2	−87	0.1	0.7	3.1	0.4	NM	2	−33	23	0.07
s	1144.0	−4	9.0	−43	0.8	1.3	3.9	5.0	28	25	−13	715	0.60
s Markets	372.6	5	17.4	−7	4.7	5.2	9.5	9.7	15	7	−3	1100	1.64
n-Dixie Stores (6)	2651.5	6	52.0	−9	2.0	2.3	22.0	23.0	15	6	17	3417	3.13
EL													
USTRY COMPOSITE	**88624.8**	**−4**	**3670.0**	**−1**	**4.1**	**4.0**	**7.3**	**10.7**	**20**	**1**	**−3**	**278025**	**2.63**
L, OIL & GAS													
UP COMPOSITE	**85833.7**	**−5**	**3508.9**	**−1**	**4.1**	**3.9**	**7.2**	**10.7**	**19**	**1**	**−3**	**260014**	**2.70**
erada Hess	1869.2**	18	83.7	NM	4.5	0.2	NM	−7.2	NM	7	NA	4490	−2.36
oco	5860.0	−6	398.0	74	6.8	3.7	10.8	14.6	14	0	−7	27742	4.00
land Oil (3)	2024.1	−10	32.9	NM	1.6	0.0	9.9	15.6	13	0	−2	2450	3.17
ntic Richfield	3440.0	−18	149.0	−43	4.3	6.2	3.2	2.5	NM	0	−26	15695	0.98
lington Resources	320.3	1	47.7	6	14.9	14.3	7.9	9.9	23	−5	27	5755	1.97
vron	8264.0**	−9	388.0	−23	4.7	5.5	6.3	8.2	26	−1	14	29398	3.54
stal	2700.8	2	81.1	224	3.0	0.9	6.0	7.0	21	10	−14	3253	1.51
mond Shamrock	583.8	−6	12.2	144	2.1	0.8	5.9	6.9	22	11	−18	798	1.25
on Oil & Gas	152.2	11	30.3	0	19.9	22.1	NM	14.8	27	13	45	3686	1.73
on	23223.0**	−5	1160.0	−2	5.0	4.8	10.5	14.8	15	2	6	78389	4.19
	777.5	−9	25.0	NM	3.2	0.0	6.7	8.7	12	4	−23	1094	6.10
r-McGee	800.9	2	21.6	−11	2.7	3.1	4.6	4.9	30	0	−7	2357	1.51
isiana Land & Exploration	206.7**	11	6.2	130	3.0	1.4	2.9	2.7	77	3	−31	1327	0.52
oco	692.1**	0	41.4	22	6.0	4.9	11.5	23.4	14	1	6	1861	4.49
hell Energy & Development (11) †	230.9	−8	6.0	−69	2.6	7.8	3.1	3.3	38	3	73	981	0.49
oil	13402.0**	−1	535.0	9	4.0	3.6	9.3	12.2	15	1	−2	31225	5.19
idental Petroleum	2106.0	−3	−40.0	NM	NM	3.8	1.2	−3.0	NM	−12	−33	5195	−0.32
lips Petroleum	2884.0	−5	127.0	108	4.4	2.0	6.5	11.6	27	6	−17	8302	1.19
ston Minerals Group	176.7**	5	−74.1	NM	NM	1.6	NM	NM	NM	NA	NA	169	−14.71
ker State	206.6	15	5.6	64	2.7	1.9	8.5	8.4	23	−11	−4	361	0.57
	2067.0**	−10	34.0	−3	1.6	1.5	10.6	14.2	12	−12	87	3521	2.65
aco	7434.0**	−10	202.0	−28	2.7	3.4	NM	11.8	16	2	−10	16836	4.18
co	1495.7	259	38.9	163	2.6	3.6	11.9	23.0	10	47	−14	980	3.07
on Texas Petroleum Holdings	194.0**	10	27.0	5	13.9	14.6	NM	11.4	51	9	−11	1611	0.36
cal	1694.0**	−19	54.0	−62	3.2	6.8	5.9	8.4	30	4	28	6516	0.91
X-Marathon Group	2747.0**	−7	110.0	255	4.0	1.1	NM	2.2	74	NA	NA	5087	0.24
ero Energy	281.3	−5	6.3	−60	2.2	5.3	3.4	3.0	37	12	13	935	0.59
ROLEUM SERVICES													
UP COMPOSITE	**2791.0**	**0**	**161.1**	**6**	**5.8**	**5.9**	**10.1**	**10.8**	**34**	**11**	**6**	**18011**	**1.70**
ker Hughes (3)	650.0	−6	23.3	732	3.6	0.4	5.1	5.1	32	13	−4	2598	0.57
lumberger	1640.3	3	121.5	−9	7.4	8.3	12.9	12.8	23	11	10	13395	2.35
stern Atlas	500.7	NA	16.4	NA	3.3	NA	NA	NA	NA	NA	NA	2018	NA

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22	12 MONTH EARNING PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	$ MIL	
12 **HEALTH CARE**													
INDUSTRY COMPOSITE	**56918.6**	**9**	**5685.3**	**6**	**10.0**	**10.5**	**16.8**	**20.9**	**18**	**10**	**11**	**302733**	**1.92**
(a) **DRUG DISTRIBUTION GROUP COMPOSITE**	**15114.6**	**9**	**196.0**	**-25**	**1.3**	**2.0**	**11.5**	**11.8**	**22**	**10**	**5**	**14643**	**1.25**
Arbor Drugs (5)	159.6	14	6.5	24	4.1	3.7	6.2	6.5	34	25	3	281	0.51
Bergen Brunswig (3)	1845.4**	NA	14.5	NA	0.8	NA	5.2	6.3	NA	10	-5	551	NA
Big B (11)	179.9	22	5.6	27	3.1	3.0	NA	13.4	15	6	5	169	0.72
Bindley Western Industries	916.8	15	3.6	11	0.4	0.4	6.0	6.0	13	35	15	124	0.91
Cardinal Health (9)	1510.7	25	-8.9	NM	NM	0.8	NA	5.4	NA	NA	NA	1457	NA
Drug Emporium (10)	202.2	-2	0.9	-3	0.4	0.4	NA	2.5	47	16	NA	62	0.10
Eckerd (11)	1181.5	8	35.9	94	3.0	1.7	17.8	NM	17	NA	NA	676	1.24
Fay's (11)	255.1	-1	5.9	12	2.3	2.0	9.2	11.1	13	12	8	128	0.50
Hook-SupeRx (4)	613.9	1	8.9	-12	1.5	1.7	NM	-5.7	NM	39	NA	271	-0.24
Longs Drug Stores (11)	684.7	3	16.9	3	2.5	2.5	9.1	10.0	13	10	-3	651	2.41
McKesson (9)	3176.9**	8	40.4	20	1.3	1.1	19.5	28.6	18	-9	-5	2637	3.68
Perry Drug Stores (2)	190.6	5	3.4	504	1.8	0.3	NM	-28.7	NM	6	NA	68	1.30
Revco D. S. (7)	621.2	12	12.5	193	2.0	0.8	5.8	6.4	25	NA	NA	781	0.61
Rite Aid (10)	1077.4	-3	-47.7	NM	NM	4.1	NA	2.4	63	13	7	1652	0.30
Walgreen (4)	2498.5	11	97.6	17	3.9	3.7	16.0	17.9	20	14	13	5138	2.14
(b) **DRUGS & RESEARCH GROUP COMPOSITE**	**19748.2**	**11**	**3482.6**	**5**	**17.6**	**18.6**	**19.8**	**23.5**	**17**	**10**	**9**	**172054**	**2.39**
Allergan	210.1	4	22.2	0	10.6	11.0	17.6	20.1	13	1	16	1312	1.60
American Cyanamid	1254.8	10	116.7	2	9.3	10.0	NM	-11.8	NM	-4	NA	4312	1.80
American Home Products	2144.0	2	415.8	4	19.4	19.0	29.9	38.3	12	10	6	18309	4.78
Amgen	364.0	17	93.5	16	25.7	26.0	28.4	32.3	15	53	112	5586	2.72
Bristol-Myers Squibb	2833.9	3	581.0	1	20.5	20.9	30.1	33.1	14	9	11	27323	3.83
Genentech	189.0**	33	38.9	171	20.6	10.1	6.8	7.1	71	24	2	5756	0.71
Lilly (Eli)	1637.0	5	330.7	-11	20.2	23.9	9.3	9.8	33	9	-7	14784	1.55
Marion Merrell Dow	708.0	15	86.0	16	12.1	12.0	16.4	18.6	12	41	10	4590	1.35
Merck	3514.3	48	675.2	10	19.2	25.8	18.4	22.2	17	24	15	38872	1.87
Pfizer	1982.9	6	370.7	13	18.7	17.6	16.9	18.1	27	-1	2	18894	2.22
Rhone-Poulenc Rorer	870.6	-5	77.9	-19	8.9	10.5	19.3	27.3	12	30	47	4538	2.82
Schering-Plough	1161.6	7	253.2	13	21.8	20.5	46.0	54.0	14	-4	20	11562	4.44
Syntex (5)	489.1	-3	95.8	-20	19.6	23.6	NM	30.4	7	15	5	2818	1.78
Upjohn	916.0	0	134.8	-11	14.7	16.5	13.7	18.0	12	3	8	4596	2.14
Warner-Lambert	1472.9	11	190.4	40	12.9	10.2	21.0	24.4	26	7	-2	8803	2.52
(c) **HEALTH-CARE SERVICES GROUP COMPOSITE**	**10855.9**	**8**	**718.6**	**19**	**6.6**	**6.0**	**12.1**	**16.6**	**19**	**20**	**NA**	**43834**	**1.34**
American Medical Holdings (4)	583.3	3	24.3	33	4.2	3.2	8.0	11.1	19	-3	NA	1453	1.03
Beverly Enterprises	712.2	3	15.5	49	2.2	1.5	7.0	6.6	28	7	5	1064	0.47
Caremark International	524.5	23	43	73	0.8	3.7	15.5	16.2	19	NA	NA	1234	0.95
Columbia/HCA Healthcare	2778.0	5	239.0	17	8.6	7.7	NA	NA	23	NA	NA	13593	1.79
Continental Medical Systems (6)	253.0	9	4.2	-46	1.6	3.3	5.3	4.2	33	47	51	361	0.25
Foundation Health (6)	403.6	5	19.6	5	4.9	4.9	20.3	24.5	13	NA	33	1033	2.83
Health Care & Retirement	150.3	14	9.6	26	6.4	5.8	8.0	11.8	24	NA	NA	836	1.09
Healthsouth Rehabilitation	231.3	99	12.1	37	5.2	7.6	1.8	3.4	NM	47	-1	917	0.36
Healthtrust (4)	652.5	9	47.4	25	7.3	6.3	11.9	20.2	16	102	NA	2343	1.71
Hillhaven (7)	364.0	6	11.7	24	3.2	2.7	11.0	15.0	9	-1	NA	396	2.11
Humana	853.0**	7	32.0	78	3.8	2.3	12.1	11.6	29	NA	NA	3027	0.66
Manor Care (7)	284.1	16	15.7	32	5.5	4.8	NA	14.7	22	14	34	1721	1.22
National Health Laboratories	185.0	-7	8.1	-76	4.4	16.8	21.7	61.9	13	-11	11	1059	1.00
National Medical Enterprises (7)	720.3	-9	90.7	39	12.6	8.2	NA	14.1	16	14	-6	2675	1.00
NovaCare (6)	204.0	35	16.0	101	7.8	5.3	11.8	17.3	19	51	45	1076	0.81
OrNda HealthCorp (4)	195.4**	33	0.5	NM	NM	0.9	8.3	-3.8	59	16	NA	305	0.21
U. S. Healthcare	715.9**	12	89.3	42	12.5	9.8	39.9	39.9	22	42	124	6997	2.00
United Wisconsin Services	169.2**	29	7.8	21	4.6	4.9	16.0	22.5	12	NA	NA	349	2.50
Universal Health Services	194.4**	0	10.3	19	5.3	4.4	NA	11.7	13	6	52	311	1.81
WellPoint Health Network	682.0**	16	61.6	30	9.0	8.1	17.6	17.6	15	NA	NA	3085	2.00
(d) **MEDICAL PRODUCTS GROUP COMPOSITE**	**11199.9**	**5**	**1288.0**	**11**	**11.5**	**10.9**	**14.7**	**19.6**	**20**	**8**	**14**	**72203**	**1.61**
Abbott Laboratories	2215.2	8	366.2	6	16.5	16.9	36.2	38.6	16	8	15	23094	1.71
Bard (C. R.)	247.4	5	22.8	-15	9.2	11.4	14.4	15.1	21	4	0	1237	1.11
Bausch & Lomb	438.8	8	35.7	9	8.1	8.1	11.5	17.2	17	8	9	2616	2.61
Baxter International	2193.0	7	131.0	130	6.0	2.8	NM	-6.1	NM	2	NA	6291	-0.71
Becton, Dickinson (3)	634.8	4	57.1	2	9.0	9.1	12.1	14.9	13	10	8	2697	2.71
Johnson & Johnson	3690.0	4	544.0	8	14.7	14.1	26.9	32.8	14	9	15	25885	2.81
Kendall International	193.8	-4	17.2	72	8.9	5.0	16.0	25.2	16	NA	NA	863	2.71
Mallinckrodt Group (6)	486.7	11	42.9	41	8.8	6.9	NM	-9.0	NM	NA	NA	2562	-1.11
Medtronic (8)	334.6	9	56.9	19	17.0	15.5	24.8	24.3	19	17	17	4301	3.81
Owens & Minor	390.8	23	4.8	24	1.2	1.2	11.3	14.2	24	13	29	464	0.91
Stryker	148.8	10	17.3	20	11.7	10.7	19.7	21.9	20	26	31	1258	1.31
U. S. Surgical	226.0	-31	-7.9	NM	NM	11.0	NM	-29.0	NM	34	NA	935	-3.21

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CORPORATE SCOREBOARD

MPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
USING & REAL ESTATE													
STRY COMPOSITE	**7940.9**	**13**	**124.7**	**12**	**1.6**	**2.2**	**9.5**	**13.7**	**19**	**6**	**-13**	**26040**	**1.77**
DING MATERIALS													
UP COMPOSITE	**5315.5**	**6**	**27.9**	**-15**	**0.5**	**1.6**	**10.7**	**14.1**	**22**	**4**	**-8**	**21212**	**1.80**
rge	207.8	8	-61.9	NM	NM	NM	2.0	2.1	55	1	-48	1388	0.38
ek	169.0	-5	0.7	NM	0.4	NM	NM	-10.1	NM	-15	NA	113	-0.83
ens-Corning Fiberglas	677.0	4	-67.0	NM	NM	NM	95.4	NM	31	NA	-15	1453	1.08
Industries	1476.9	2	121.9	11	8.3	7.6	10.4	12.2	26	3	-11	7880	2.89
(7)	186.6	5	6.6	116	3.5	1.7	NA	15.6	17	13	10	964	0.99
win-Williams	639.2	3	15.5	12	2.4	2.2	15.7	16.2	17	11	9	2843	1.87
mseh Products	386.4	13	29.0	62	7.5	5.2	13.1	12.9	14	1	1	1253	4.22
s Industries (7)	170.6**	18	2.9	NM	1.7	NM	5.6	5.5	25	7	-28	410	1.46
	506.0	NA	-34.0	NA	NM	NA	NA	NA	NA	NA	NA	989	NA
par (2)	148.0	8	4.3	26	2.9	2.5	19.8	20.5	23	15	17	942	1.89
an Materials	216.9	1	-5.2	NM	NM	NM	10.3	11.9	20	2	-9	1658	2.26
International	531.2	19	15.2	17	2.9	2.9	11.7	16.9	17	NA	113	1319	2.07
STRUCTION & REAL ESTATE													
UP COMPOSITE	**2625.4**	**29**	**96.8**	**41**	**3.7**	**3.4**	**7.4**	**13.0**	**12**	**13**	**1**	**4829**	**1.69**
ex (9)	869.5**	34	21.7	42	2.5	2.3	12.2	13 2	11	10	11	901	2.60
ton Homes (6)	150.7	34	17.5	27	11.6	12.3	14.2	17.1	18	42	21	1148	1.14
nanian Enterprises (10)	257.7**	39	11.4	37	4.4	4.5	NA	12.5	12	9	-34	243	0.87
fman & Broad Home (1)	256.9	14	8.9	103	3.4	1.9	7.2	8.2	17	15	-18	603	1.04
ar (1)	192.3**	64	14.8	64	7.7	7.7	9.3	12.5	12	13	9	714	1.62
	340.6**	22	11.3	77	3.3	2.3	NA	14.1	9	17	15	727	2.79
nd Group	332.5	13	4.2	-37	1.3	2.2	NM	-2.6	NM	12	NA	302	-0.51
Home	225.3**	35	7.1	40	3.1	3.0	NM	35.4	3	-8	NA	190	6.34
SURE TIME INDUSTRIES													
STRY COMPOSITE	**19802.9**	**9**	**1142.9**	**23**	**5.8**	**5.1**	**7.3**	**9.4**	**24**	**9**	**2**	**113339**	**1.53**
NG PLACES													
UP COMPOSITE	**5512.7**	**7**	**338.9**	**19**	**6.1**	**5.5**	**1.0**	**-2.5**	**20**	**15**	**9**	**30530**	**2.03**
Evans Farms (8)	166.6	-2	12.2	7	7.3	6.8	13.5	13.8	18	11	9	846	1.12
ker International (6)	211.4	28	16.5	29	7.8	7.8	15.9	15.7	34	43	29	1972	0.83
ker Barrel Old Country Store (5)	150.8	26	9.9	30	6.6	6.4	12.4	13.0	30	46	35	1518	0.84
star	626.3	6	-12.7	NM	NM	NM	NM	NM	NA	4	NA	387	NA
riott International	1916.0	3	43.0	23	2.2	1.9	14.3	23.7	19	NA	NA	3174	1.30
onald's	1796.0	9	243.4	12	13.6	13.2	12.2	18.1	20	13	11	20957	3.00
rison Restaurants (7)	310.0**	9	12.3	17	4.0	3.7	15.8	18.4	22	5	8	887	1.14
ney's (2)	335.6**	6	14.2	17	4.2	3.8	41.2	NM	13	NA	10	790	1.47
RTAINMENT													
UP COMPOSITE	**3985.8**	**17**	**284.4**	**10**	**7.1**	**7.6**	**9.7**	**10.6**	**27**	**19**	**2**	**33570**	**1.38**
kbuster Entertainment	696.5	61	72.6	62	10.4	10.3	10.4	12.8	21	75	47	6092	1.17
ey (Walt) (3)	2275.8	12	248.4	16	10.9	10.6	13.4	14.8	29	16	5	22877	1.46
amount Communications (8)	1013.5	7	-36.6	NM	NM	0.0	4.4	4.0	27	15	-4	4602	1.39
EL & MOTEL													
UP COMPOSITE	**1214.7**	**15**	**97.6**	**21**	**8.0**	**7.6**	**9.6**	**15.6**	**23**	**16**	**0**	**9443**	**1.59**
sars World (5)	258.0	-2	22.0	-14	8.5	9.7	13.4	17.7	12	21	4	1119	3.77
s Circus Enterprises (11)	272.1	42	25.5	28	9.4	10.5	NA	20.9	21	17	20	2453	1.34
n Hotels	338.8**	2	22.7	-2	6.7	7.0	6.6	9.7	26	5	-5	2599	2.13
mus	345.8	28	27.4	129	7.9	4.4	12.1	20 0	31	34	45	3271	1.04
ER LEISURE													
UP COMPOSITE	**9089.7**	**7**	**422.0**	**38**	**4.6**	**3.6**	**9.4**	**13.1**	**25**	**1**	**-1**	**39796**	**1.32**
erican Greetings (10)	474.5**	6	39.5	16	8.3	7.6	NA	12.8	17	13	25	2215	1.77
nswick	634.9	17	26.4	169	4.2	1.8	7.2	8.8	29	-2	-25	2036	0.75
nival (1)	385.3	19	65.1	28	16.9	15.7	14.7	20.4	19	16	10	6458	2.35
Group (5)	292.0	24	38.3	18	13.1	13.8	23.8	29.5	12	31	31	746	1.26
(11)	146.0	6	8.2	-22	5.6	7.7	NA	6.6	20	8	1	217	0.76
man Kodak	3592.0	1	94.0	0	2.6	2.7	8.1	14.2	28	-10	-19	13471	1.45
twood Enterprises (8)	548.6	23	12.1	12	2.2	2.4	8.3	11.4	15	7	-4	891	1.30
ley-Davidson	343.7	28	20.8	37	6.1	5.6	7.0	7.0	74	23	-4	1795	0.64
man International Industries (6)	222.9	33	8.2	104	3.7	2.4	10.2	10.7	17	8	-17	445	1.79
bro	489.1	0	26.7	1	5.5	5.5	14.8	15.7	15	12	22	2974	2.22
fy	189.2	-12	4.8	-1	2.6	2.3	NM	-2.9	NM	10	NA	251	-0.21
tel	487.3	2	24.1	30	4.9	3.9	14.9	16.7	31	42	19	4162	0.79
sicland Stores	269.4	20	-2.1	NM	NM	NM	9.5	9.6	20	47	42	680	0.98
board Marine (3)	263.5	-4	19.1	NM	7.2	0.4	NM	-91.0	NM	-20	NA	411	-7.01
aroid	462.6	-1	1.4	NM	0.3	NM	9.0	12.2	16	15	-6	1446	1.99
al Caribbean Cruises	288.7	7	35.4	76	12.3	7.5	12.1	16.6	13	NA	NA	1598	1.97

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING	12 MONTH EARNIN PER SHARI
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P/E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	4-22 $ MIL	
15 MANUFACTURING													
INDUSTRY COMPOSITE	**28655.9**	**11**	**1601.6**	**57**	**5.6**	**3.9**	**11.9**	**15.4**	**21**	**2**	**-4**	**109237**	**1.8**
(a) **GENERAL MANUFACTURING**													
GROUP COMPOSITE	**9908.2**	**7**	**636.5**	**-1**	**6.4**	**6.9**	**11.7**	**14.6**	**24**	**6**	**3**	**51470**	**1.5**
Avery Dennison	667.7	0	25.2	14	3.8	3.3	10.7	11.8	18	9	0	1503	1.5
Carlisle	154.7	12	6.8	15	4.4	4.3	11.2	13.0	17	2	4	488	1.8
Corning	948.9**	16	58.0	16	6.1	6.1	0.4	-0.5	NM	2	NA	6119	-0.0
Crane	331.7	6	7.4	-31	2.2	3.4	13.0	15.7	17	0	-6	762	1.5
Harsco	318.7	-8	18.6	-23	5.8	7.0	9.3	14.1	14	5	39	1058	3.0
Harvard Industries (3)	169.1	15	6.6	NM	3.9	NM	NM	NM	NM	6	NA	61	-19.0
Hillenbrand Industries (1)	377.4	8	37.7	11	10.0	9.8	19.4	21.3	20	12	15	2761	1.9
Illinois Tool Works	771.4	3	50.9	21	6.6	5.6	13.4	16.5	21	12	6	4469	1.9
International Game Technology (3)	164.5	67	31.4	66	19.1	19.1	27.9	30.2	24	40	61	3118	1.0
Mark IV Industries (10)	319.8	16	11.6	27	3.6	3.3	9.1	14.9	14	33	11	730	1.2
Minnesota Mining & Mfg.	3632.0	3	306.0	-7	8.4	9.4	17.1	19.4	19	4	2	20014	2.5
Newell	443.5	33	31.5	14	7.1	8.3	15.2	17.3	18	28	14	3132	2.1
Parker Hannifin (6)	677.4	12	-19.1	NM	NM	2.5	4.0	3.3	64	2	-12	1960	0.6
Rubbermaid †	491.6	2	50.6	2	10.3	10.3	18.9	18.2	20	17	13	4310	1.3
Trinova	439.8	2	13.3	136	3.0	1.3	6.5	6.7	54	-19	-30	984	0.6
(b) **MACHINE & HAND TOOLS**													
GROUP COMPOSITE	**3164.4**	**9**	**88.4**	**27**	**2.8**	**2.4**	**6.8**	**10.0**	**23**	**2**	**-15**	**7287**	**1.2**
Black & Decker	1084.6	-1	14.6	5	1.3	1.3	6.0	9.4	18	5	-3	1541	1.0
Cincinnati Milacron	245.5	12	5.0	38	2.0	1.6	NM	-37.5	NM	-14	NA	664	-1.3
Danaher	289.2**	16	14.5	44	5.0	4.1	13.0	16.0	20	19	-6	1124	2.0
Nacco Industries	383.2	11	2.8	NM	0.7	NM	5.6	6.1	29	-3	-24	416	1.6
Snap-on Tools	298.8**	10	22.8	23	7.6	6.8	11.0	12.6	18	6	-9	1586	2.1
SPX	277.5	55	3.1	768	1.1	0.2	4.9	12.3	10	-11	-14	214	1.5
Stanley Works	585.7	6	25.6	11	4.4	4.2	10.5	13.7	18	0	-4	1743	2.1
(c) **SPECIAL MACHINERY**													
GROUP COMPOSITE	**13406.3**	**14**	**823.7**	**228**	**6.1**	**2.1**	**14.2**	**18.0**	**19**	**-3**	**-16**	**45019**	**2.6**
Applied Materials (2)	340.4	58	37.4	155	11.0	6.8	18.1	19.1	29	24	6	3424	1.4
Briggs & Stratton (6)	386.2	7	35.7	16	9.2	8.5	21.6	25.4	13	4	18	1161	6.1
Caterpillar	3286.0	22	192.0	465	5.8	1.3	20.5	38.2	13	-17	4	10988	8.2
Clark Equipment	245.4	23	26.9	933	11.0	1.3	16.1	22.2	15	-13	-4	1001	3.8
Deere (2)	1726.8**	21	87.0	NM	5.0	NM	12.0	14.4	20	-3	-26	6768	3.8
Dover	680.7	20	42.6	26	6.3	6.0	15.9	19.2	19	3	3	3158	2.9
Dresser Industries (2)	1357.5	21	193.4	713	14.2	2.1	18.6	21.7	12	-11	-7	3901	1.8
FMC	908.3	1	46.1	1	5.1	5.0	12.8	19.2	41	8	-14	1660	1.1
General Signal	388.5	3	24.6	37	6.3	4.8	11.8	13.9	19	-1	0	1521	1.6
Harnischfeger Industries (2)	280.3**	-1	2.5	235	0.9	0.3	NM	-3.7	NM	3	NA	566	-0.6
Ingersoll-Rand	1010.3	6	33.0	34	3.3	2.6	11.9	12.7	21	1	-5	3619	1.6
Joy Technologies (10)	157.9	1	7.5	NM	4.8	NM	10.0	46.6	28	NA	NA	376	0.4
Pentair	389.3	21	11.1	17	2.9	3.0	10.1	12.7	14	8	0	601	2.3
Stewart & Stevenson Services (11)	244.7	10	16.8	29	6.9	5.9	NA	16.6	26	32	21	1505	1.7
Timken	466.5	10	7.7	143	1.7	0.8	NM	-1.9	NM	-6	NA	1014	-0.4
Tyco International (6)	809.9	9	32.3	22	4.0	3.6	8.3	8.8	24	15	-8	2074	1.8
Varity (11)	727.7	-11	27.0	141	3.7	1.4	13.0	10.6	21	7	-16	1681	1.8
(d) **TEXTILES**													
GROUP COMPOSITE	**2177.0**	**11**	**53.0**	**-4**	**2.4**	**2.8**	**9.3**	**13.3**	**20**	**8**	**9**	**5462**	**1.1**
Cone Mills	195.9	0	10.0	-21	5.1	6.5	15.9	25.8	8	19	66	375	1.6
Fieldcrest Cannon	232.3	14	5.5	105	2.4	1.3	7.0	8.4	20	-4	-4	268	1.5
Guilford Mills (3)	155.6	2	3.9	-36	2.5	4.0	8.2	10.9	18	2	2	318	1.2
Interface	160.7	19	2.8	28	1.8	1.6	5.7	7.2	18	6	-14	233	0.7
Mohawk Industries	327.1	30	-0.4	NM	NM	2.3	7.5	14.5	28	NA	NA	515	1.0
Shaw Industries (6)	620.1	19	25.3	53	4.1	3.2	13.3	17.5	25	32	15	3157	0.8
Springs Industries	485.2	-3	5.8	-37	1.2	1.8	7.0	8.1	14	0	-6	596	2.4
16 METALS & MINING													
INDUSTRY COMPOSITE	**14049.5**	**9**	**183.3**	**NM**	**1.3**	**NM**	**-0.6**	**-4.8**	**NM**	**-1**	**-28**	**41792**	**-0.5**
(a) **ALUMINUM**													
GROUP COMPOSITE	**4977.0**	**2**	**-134.2**	**NM**	**NM**	**NM**	**-3.7**	**-12.7**	**NM**	**NA**	**NA**	**10385**	**-3.0**
Alumax	597.4	6	-8.9	NM	NM	NM	NM	-12.0	NM	NA	NA	987	-2.9
Aluminum Co. of America	2221.6	5	-40.4	NM	NM	1.3	NM	-1.9	NM	-7	-70	5986	-0.7
Kaiser Aluminum	415.1	-6	-29.3	NM	NM	NM	NM	NM	NM	NA	NA	502	-2.5
Maxxam	489.0	-5	-34.5	NM	NM	NM	NM	NM	NM	NA	NA	301	-14.8
Reynolds Metals	1253.9	2	-21.1	NM	NM	NM	NM	-19.3	NM	-5	NA	2609	-5.2
(b) **STEEL**													
GROUP COMPOSITE	**6739.2**	**12**	**165.9**	**NM**	**2.5**	**NM**	**-2.5**	**-10.1**	**NM**	**-3**	**-14**	**16649**	**-0.7**
Allegheny Ludlum	313.9	8	18.1	-1	5.8	6.3	13.8	17.2	17	6	-15	1252	1.0
Armco	379.6	-11	-27.2	NM	NM	NM	NM	NM	NM	-23	NA	508	-2.6
Bethlehem Steel	1131.2	11	12.9	NM	1.1	NM	NM	-37.5	NM	-23	NA	1805	-2.8
Birmingham Steel (6)	204.2	77	5.1	NM	2.5	0.3	3.3	5.3	45	14	-31	663	0.6

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING	12 MONTHS' EARNINGS
	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	4-22 $ MIL	PER SHARE
penter Technology (6)	174.3	12	12.8	26	7.4	6.6	10.0	15.2	14	−5	−4	465	4.12
mmercial Metals (4)	392.2**	−5	4.3	−12	1.1	1.2	8.7	9.8	14	6	−9	338	1.59
ens	220.9	0	−2.5	NM	NM	2.8	3.3	0.7	NM	10	−20	418	0.16
ional Steel	622.7	6	78.0	NM	12.5	NM	NM	−79.9	NM	−26	NA	445	−3.37
or	649.7	33	34.9	60	5.4	4.4	10.2	15.1	38	11	10	5235	1.57
gon Steel Mills	214.8	44	3.7	−46	1.7	4.5	4.1	4.2	38	27	−10	426	0.58
nex (2)	149.5	6	1.8	264	1.2	0.3	5.0	2.7	74	4	−41	266	0.27
-U. S. Steel Group	1384.0	15	−35.0	NM	NM	0.8	NM	−32.7	NM	NA	NA	2409	−4.21
rton Steel	325.2	9	2.9	NM	0.9	NM	NM	NM	NM	−7	NA	240	−0.68
eeling-Pittsburgh	253.8	8	36.5	NM	14.4	NM	11.0	14.5	7	42	−58	415	2.35
rthington Industries (7)	323.1	17	19.7	31	6.1	5.5	14.3	17.2	22	8	1	1765	0.90
IER METALS													
UP COMPOSITE	**2333.3**	**17**	**151.6**	**174**	**6.5**	**2.8**	**4.7**	**5.5**	**32**	**6**	**−23**	**14758**	**0.77**
rco	443.0	−4	26.6	NM	6.0	NM	NM	−0.9	NM	1	NA	954	−0.32
rus Amax Minerals	588.4	57	18.7	62	3.2	3.1	4.7	4.5	13	10	−24	2399	2.04
eport-McMoRan Copper & Gold	266.2	99	25.9	200	9.7	6.5	6.1	10.9	NM	26	−15	4556	0.21
nestake Mining	165.9	2	24.2	335	14.6	3.4	9.1	13.3	35	−10	NA	2441	0.51
gma Copper	175.5	−10	7.6	NM	4.3	0.1	4.7	3.6	27	8	−13	657	0.53
lps Dodge	694.3	4	48.6	−19	7.0	9.0	6.8	8.6	21	9	−13	3751	2.50
ONBANK FINANCIAL													
USTRY COMPOSITE	**64131.0**	**15**	**4329.9**	**−13**	**6.8**	**9.0**	**9.1**	**14.0**	**12**	**12**	**13**	**211524**	**3.40**
ANCIAL SERVICES													
UP COMPOSITE	**33096.6**	**27**	**3090.9**	**4**	**9.3**	**11.4**	**9.6**	**20.4**	**9**	**16**	**16**	**118307**	**4.42**
xander & Alexander Services	323.0	−1	−1.8	NM	NM	3.0	NM	1.3	NM	−10	−21	642	0.09
x. Brown	162.4**	16	23.0	15	14.2	14.4	NA	26.7	5	10	37	400	5.78
ghany	529.0	26	19.9	−40	3.8	8.0	8.4	9.2	11	10	10	963	12.42
erican Express	3373.0	8	317.0	−55	9.4	22.5	NA	19.1	9	12	−3	14511	3.31
T Capital	326.0	0	15.8	7	4.8	4.5	4.6	7.9	15	NA	NA	1131	1.60
r Stearns (6)	899.0	23	115.5	5	12.8	15.0	27.9	28.5	5	12	33	2288	3.81
ck (H&R) (8)	223.3	25	−17.9	NM	NM	3.2	28.2	28.2	30	12	15	4495	1.43
ntrywide Credit Industries (10)	281.3	51	47.1	21	16.8	20.9	20.8	21.4	7	52	41	1244	2.96
wford	148.8	1	10.1	9	6.8	6.2	NA	18.3	14	16	14	546	1.08
n Witter, Discover	1590.0	15	209.5	54	13.2	9.9	17.7	19.5	9	NA	NA	6376	3.97
vards (A. G.) (10)	322.1	5	40.1	10	12.5	11.9	NA	20.9	7	17	28	1360	2.57
ifax	319.4	16	24.3	34	7.6	6.6	16.7	27.4	28	2	5	1964	0.93
nie Mae	4303.6**	11	518.8	7	12.1	12.5	7.8	25 8	11	30	27	22432	7.58
eral Home Loan Mortgage	1574.0	35	277.0	37	17.6	17.3	4.2	18.3	12	24	15	9839	4.45
elity National Financial	143.6	30	6.8	58	4.7	3.9	24.7	33.8	7	33	60	269	2.49
t American Financial	372.4**	34	9.4	110	2.5	1.6	NA	25 4	5	6	−9	325	5.89
t Financial Management	432.9**	24	27.5	28	6.4	6.2	NA	10.5	24	35	−6	3229	2.22
rsh & McLennan	910.2	9	130.7	22	14.4	12.9	20.4	26.1	17	11	2	6210	4.83
rrill Lynch	4738.8**	20	371.8	9	7.8	8.6	10.5	25.9	6	11	31	7242	6.31
rgan Stanley Group (11)	2081.0	16	181.2	28	8.7	7.9	62.0	22.8	6	23	10	4580	9.59
neWebber Group	1082.4**	16	55.6	−22	5.1	7.6	33.5	19 1	6	12	71	1285	2.94
ie Mae	645.1	−4	121.8	−17	18.9	21.9	5.0	38.5	6	11	25	3205	6.21
amon	1769.0**	11	66.0	NM	3.7	NM	18.9	22.0	6	9	29	5487	8.57
wab (Charles)	323.1	20	38.2	8	11.8	13.1	24.4	33.5	14	18	77	1677	2.14
America (3)	219.1**	5	40.0	35	18.3	14.2	10.9	17 0	12	12	30	1238	3.15
nsamerica	1235.4**	8	103.7	12	8.4	8.1	9.0	14.9	9	2	0	3839	5.65
velers	4768.5**	266	339.8	64	7.1	15.9	9.4	12.2	9	32	21	11531	3.97
URANCE													
UP COMPOSITE	**28897.3**	**6**	**1040.0**	**−44**	**3.6**	**6.8**	**7.0**	**8.1**	**17**	**9**	**8**	**85549**	**2.45**
na Life & Casualty	4313.6	0	45.7	−67	1.1	3.2	−8.5	−10.1	NM	2	NA	5975	−6.40
AC	1392.0	24	70.0	30	5.0	4.8	11.6	19.0	12	16	20	3065	2.48
tate	5320.0	4	−275.2	NM	NM	6.3	NA	8.2	15	NA	NA	10575	1.59
erican Bankers Insurance Group	284.6	39	9.2	−20	3.2	5.6	10.3	13.4	8	16	23	439	2.61
erican General	2074.7**	6	160.9	12	7.8	7.3	4.1	5.8	21	4	−2	5116	1.24
erican International Group	4864.9**	13	505.6	6	10.4	11 0	9.7	12.8	14	16	8	27634	6.13
erican National Insurance	320.6	−6	36.3	−30	11 3	15 1	NA	NA	8	5	15	NA	6.43
kers Life Holding	349.0	−2	26.6	−11	7.6	8.4	NA	24.7	8	NA	NA	1077	2.44
mont General	156.1	3	13.5	46	8.6	6.1	9.3	12.7	7	19	20	354	3.22
rtford Steam Boiler Inspection	150.6	−6	11.9	−33	7.9	11.1	2.1	2.2	NM	4	−24	925	0.35
race Mann Educators	180.1	0	12.1	−37	6.7	10.7	NA	17.0	11	NA	NA	804	2.42
mper	464.5**	11	54.3	NM	11.7	NM	NM	−4.2	NM	−4	NA	1896	−0.79
coln National	2006.2	3	151.0	119	7.5	3.6	11.8	12.8	8	11	13	3473	4.82
l Revere	320.8	12	26.4	29	8.2	7.2	8.6	8.3	11	NA	NA	1035	2.04
gressive	552.4**	27	48.1	−7	8.7	11.9	19.8	27.9	10	13	20	2406	3.51
vident Life & Accident	689.4**	−1	35.6	8	5.2	4.7	4.8	−7.3	NM	3	NA	1165	−2.02
eco	916.4**	7	56.0	−23	6.1	8.4	13.3	13.3	8	11	10	3321	6.51
Paul	1163.8	4	64.4	−27	5.5	7.9	11.2	13.2	9	6	6	3463	9.29
chmark	498.7	−5	75.6	48	15.2	9.7	13.8	21.2	10	11	12	2852	4.10
nsatlantic Holdings	228.8	41	19.2	−1	8.4	11.9	11.2	11.2	13	21	11	1093	3.78
h Century Industries	277.6	6	−256.1	NM	NM	7.6	−25.6	−25.6	NM	22	13	810	−3.26
trin	338.5	1	25.3	−36	7.5	11.7	3.6	3.9	25	4	−6	2034	1.56

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL	12 MONTH EARNIN PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P/E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
UNUM	877.4	7	77.1	1	8.8	9.2	19.7	14.9	14	10	23	4118	4.03
USF&G	766.0	-12	23.0	0	3.0	2.6	NM	7.5	13	-14	NA	1063	0.93
USLife	390.7	2	23.6	15	6.0	5.3	9.0	10.4	9	1	8	855	4.38
(c) **SAVINGS & LOAN**													
GROUP COMPOSITE	**2137.2**	**-4**	**198.9**	**14**	**9.3**	**7.8**	**NA**	**8.7**	**30**	**9**	**3**	**7668**	**0.75**
Ahmanson (H. F.)	778.7	-4	55.4	68	7.1	4.1	NA	NA	NM	10	NA	2177	-1.37
Golden West Financial	463.1	-2	65.3	-9	14.1	15.1	NA	13.0	9	18	16	2477	4.18
Great Western Financial	698.8	-7	49.5	9	7.1	6.1	NA	1.9	57	2	-29	2254	0.30
Standard Federal Bank	196.6	4	28.8	17	14.7	13.0	NA	16.9	7	12	18	760	3.62
18 **OFFICE EQUIPMENT & COMPUTERS**													
INDUSTRY COMPOSITE	**51232.0**	**10**	**2305.8**	**99**	**4.5**	**2.5**	**-2.1**	**-5.8**	**NM**	**-2**	**9**	**193363**	**-0.76**
(a) **BUSINESS MACHINES & SERVICES**													
GROUP COMPOSITE	**3290.1**	**23**	**161.4**	**13**	**4.9**	**5.3**	**14.9**	**16.7**	**21**	**9**	**4**	**12193**	**1.20**
CompuCom Systems	280.9	40	2.8	49	1.0	0.9	9.6	22.2	15	23	44	172	0.36
CUC International (11)	233.3	18	25.2	41	10.8	9.0	33.9	35.8	39	NA	16	3325	0.77
Deluxe	430.0	6	38.0	-27	8.8	12.8	14.1	16.0	18	8	3	2239	1.55
Diebold	176.8	31	12.7	47	7.2	6.4	12.9	12.3	24	3	8	1233	1.73
HON Industries	200.7	8	11.6	43	5.8	4.4	20.7	26.8	21	5	14	1022	1.51
Intelligent Electronics (11)	740.0	30	12.8	90	1.7	1.2	19.0	18.8	17	94	35	654	1.13
Miller (Herman) (7)	241.9	11	11.2	55	4.6	3.3	11.8	12.6	16	2	-18	624	1.52
Reynolds & Reynolds (3)	205.5	20	15.5	16	7.5	7.8	14.5	20.9	16	5	18	910	1.31
Standard Register	183.9	9	10.0	7	5.4	5.5	10.7	11.5	14	4	3	609	1.49
Tech Data (11)	444.0	56	8.8	55	2.0	2.0	14.9	14.2	22	39	32	667	0.83
Wallace Computer Services (5)	153.1	11	12.8	10	8.4	8.4	10.3	11.2	17	12	2	737	1.90
(b) **COMPUTERS & PERIPHERALS**													
GROUP COMPOSITE	**39925.6**	**8**	**1200.6**	**367**	**3.0**	**0.7**	**-7.2**	**-13.9**	**NM**	**-5**	**NM**	**101291**	**-2.77**
Amdahl	378.8	-1	7.1	NM	1.9	NM	NM	-42.2	NM	-2	NA	845	-2.92
Apple Computer (3)	2076.7	5	17.4	-84	0.8	5.6	-4.7	-6.2	NM	15	-18	3466	-1.13
AST Research (6)	591.3	60	13.2	20	2.2	3.0	NM	-13.7	NM	30	NA	563	-1.59
Compaq Computer	2278.0	41	213.0	108	9.4	6.4	21.8	21.6	16	24	1	9089	6.66
Conner Peripherals	564.0	1	23.8	NM	4.2	NM	NM	NM	NM	22	NA	752	-8.10
Control Data Systems	145.6	42	1.4	2	0.9	1.3	NA	5.2	15	NA	NA	133	0.66
Cray Research	248.9	23	22.0	46	8.8	7.4	8.4	8.7	10	4	-10	672	2.59
Data General (3)	282.9	6	-48.0	NM	NM	NM	NM	-39.2	NM	-7	NA	252	-3.48
Dell Computer (11)	742.9	20	17.7	-43	2.4	5.0	NM	-8.4	NM	52	NA	896	-1.04
Digital Equipment (6)	3258.8	-6	-183.3	NM	NM	NM	NM	-4.9	NM	-10	NA	2672	-1.79
EMC	267.1	92	48.8	227	18.3	10.8	23.9	38.4	22	26	120	3278	0.80
Hewlett-Packard (2)	5682.0	24	368.0	41	6.5	5.7	14.5	14.7	15	13	5	19474	5.04
Intergraph	240.1	-15	-14.0	NM	NM	NM	NM	-20.8	NM	0	NA	434	-2.68
International Business Machines	13373.0	2	392.0	NM	2.9	NM	NM	-39.6	NM	-13	NA	34156	-12.96
Maxtor (9)	260.4	-25	-4.5	NM	NM	NM	NA	NM	NM	11	10	200	-8.00
Quantum (9)	635.0	25	38.5	47	6.1	5.2	NA	0.8	NM	33	46	706	0.04
Seagate Technology (6)	909.3	21	67.0	72	7.4	5.2	10.3	15.5	10	20	62	1743	2.41
Silicon Graphics (6)	376.3	39	35.1	73	9.3	7.5	12.9	17.6	28	36	27	3242	0.83
Storage Technology	335.6	-1	-19.6	NM	NM	1.2	NM	-15.1	NM	33	NA	1308	-3.53
Sun Microsystems (6)	1196.0	5	57.5	11	4.8	4.5	12.1	13.2	11	34	17	2045	1.95
Tandem Computers (3)	484.1	-6	25.8	132	5.3	2.1	-58.3	-64.8	NM	0	NA	1354	-4.40
3Com (7)	218.2	35	-103.5	NM	NM	6.3	-17.8	-17.9	NM	6	-11	1527	-1.40
Unisys	1688.9	-11	67.7	19	4.0	3.0	11.7	23.7	8	-27	NA	1959	1.51
Western Digital (6)	420.9	29	28.4	NM	6.8	0.5	NM	-1.4	NM	-18	NA	542	-0.14
Xerox	3271.0	1	129.0	15	3.9	3.5	NM	-8.4	NM	-6	NA	9983	-2.46
(c) **COMPUTER SOFTWARE & SERVICES**													
GROUP COMPOSITE	**8016.3**	**17**	**943.9**	**24**	**11.8**	**11.1**	**16.2**	**17.3**	**35**	**22**	**21**	**79880**	**1.14**
Automatic Data Processing (6)	674.4**	10	105.0	14	15.6	15.1	17.0	20.2	22	9	14	7111	2.25
Cabletron Systems (10)	168.2	37	33.5	37	19.9	19.9	NA	31.4	25	94	56	2940	4.29
Ceridian	221.3	1	22.2	72	10.0	5.7	NM	-12.5	NM	-32	NA	1069	-0.31
Cirrus Logic (9)	170.2	63	14.6	490	8.6	2.4	10.4	11.0	23	39	-10	891	1.31
Cisco Systems (5)	302.2	108	77.5	100	25.6	26.7	37.1	37.1	34	185	135	7732	0.91
Comdisco (3)	529.0**	0	24.0	14	4.5	4.0	9.4	13.1	9	7	-14	766	2.11
CompUSA (6)	599.1	63	3.4	-22	0.6	1.2	2.7	0.4	NM	NA	NA	322	0.00
Computervision	148.8	-33	0.5	NM	0.3	NM	NA	NM	NM	NA	NA	162	-11.66
Electronic Data Systems	2217.2	8	171.7	13	7.7	7.4	14.9	19.8	22	21	14	9044	1.51
First Data	375.8	8	43.7	20	11.6	10.5	14.0	18.9	27	NA	NA	4851	1.61
Gtech Holdings (10)	163.7	18	12.0	46	7.4	6.0	13.0	24.2	25	NA	NA	1426	1.21
Lotus Development	247.0	9	21.3	74	8.6	5.4	11.0	12.2	40	17	2	2522	1.31
Microsoft (6)	1244.0	30	256.0	5	20.6	25.4	26.1	26.1	27	55	47	26057	3.41
Novell (2)	311.4	20	72.8	3	23.4	27.2	-2.7	-2.8	NM	54	NA	5080	-0.05
Oracle Systems (7)	482.8	30	69.7	139	14.4	7.9	31.4	36.5	38	28	13	8641	0.85
SynOptics Communications	161.3	6	15.9	-27	9.8	14.3	16.3	21.2	20	58	46	1268	1.01

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CORPORATE SCOREBOARD

MPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL	12 MONTHS' EARNINGS PER SHARE
APER & FOREST PRODUCTS													
USTRY COMPOSITE	**21215.4**	**1**	**537.4**	**-11**	**2.5**	**2.9**	**0.4**	**-2.0**	**42**	**2**	**-14**	**57421**	**-0.43**
REST PRODUCTS													
OUP COMPOSITE	**5515.5**	**3**	**145.1**	**-8**	**2.6**	**2.9**	**2.1**	**3.6**	**53**	**0**	**-4**	**12349**	**0.75**
se Cascade	1014.1	3	-37.6	NM	NM	NM	NM	-15.3	NM	-10	NA	826	-3.96
orgia-Pacific	2955.0	0	56.0	37	1.9	1.4	0.0	-0.1	NM	-2	NA	5236	-0.05
isiana-Pacific	698.0	8	85.2	-3	12.2	13.5	12.2	16.0	14	6	8	3484	2.29
e & Talbot	168.7	1	8.6	-22	5.1	6.6	7.2	8.3	16	0	-10	291	1.60
lamette Industries	679.7	7	32.9	6	4.8	4.9	6.6	9.0	22	10	-16	2512	2.06
PER													
OUP COMPOSITE	**15699.9**	**1**	**392.3**	**-12**	**2.5**	**2.9**	**0.0**	**-3.4**	**39**	**2**	**-15**	**45072**	**-0.72**
water	308.9	-11	-21.4	NM	NM	NM	NM	-9.2	NM	-3	NA	770	-1.86
ampion International	1226.1	-3	-31.0	NM	NM	NM	NM	-5.7	NM	-3	NA	2779	-1.78
esapeake	212.0	1	2.7	NM	1.3	NM	3.9	3.8	41	6	-30	561	0.58
nsolidated Papers	232.2	-4	15.3	-13	6.6	7.2	5.5	6.6	28	5	-21	1728	1.42
t Howard	275.3	-3	-15.2	NM	NM	NM	NM	NM	NA	NA	NA	NA	NM
ernational Paper	3400.0	1	72.0	13	2.1	1.9	4.2	4.8	25	6	-27	7557	2.40
nes River Corp. of Virginia	1105.5	-1	-7.1	NM	NM	NM	0.0	-2.0	NM	NA	NA	1439	-0.37
nberly-Clark	1776.5	4	136.2	9	7.7	7.3	15.4	21.3	17	5	3	8671	3.25
nville	531.2	5	7.4	-75	1.4	5.9	NM	2.0	62	16	-25	979	0.13
ad	1155.6	2	27.6	8	2.4	2.3	5.8	7.9	19	-1	-25	2382	2.10
latch	365.3	1	5.3	-76	1.5	6.1	2.8	2.4	55	6	-20	1175	0.73
yonier	257.7	19	21.7	29	8.4	7.8	9.4	9.5	14	-2	NA	820	1.93
tt Paper	1100.4	-4	25.2	7	2.3	2.0	NM	-18.3	NM	-3	NA	3035	-3.89
on Camp	790.1	4	11.3	-10	1.4	1.6	3.1	2.7	61	3	-36	3003	0.70
stvaco (2)	577.3	3	15.8	-24	2.7	3.7	3.0	2.8	39	7	-21	2020	0.78
yerhaeuser	2385.8	2	126.5	-29	5.3	7.6	7.2	12.0	17	-2	1	8152	2.33
BLISHING & BROADCASTING													
USTRY COMPOSITE	**13155.9**	**10**	**591.0**	**14**	**4.5**	**4.3**	**7.2**	**13.2**	**29**	**0**	**-5**	**75376**	**1.82**
OADCASTING													
OUP COMPOSITE	**2798.3**	**27**	**202.7**	**45**	**7.2**	**6.4**	**14.9**	**20.5**	**18**	**-5**	**2**	**16197**	**13.25**
oital Cities/ABC	1404.9	19	116.1	65	8.3	6.0	12.1	14.4	22	4	2	10768	31.80
S	1246.9	42	69.3	28	5.6	6.2	19.1	28.9	13	-25	12	4405	21.12
ltimedia	146.4	5	17.3	14	11.8	10.9	23.6	NM	12	NA	22	1023	2.28
BLISHING													
OUP COMPOSITE	**10357.6**	**6**	**388.3**	**3**	**3.8**	**3.9**	**5.6**	**11.1**	**35**	**1**	**-7**	**59180**	**1.24**
mmerce Clearing House	155.2	-6	11.4	51	7.3	4.6	10.2	10.5	53	-15	-31	547	0.30
w Jones	499.2	8	43.2	40	8.7	6.7	9.7	10.7	24	4	-15	3892	1.60
n & Bradstreet	1099.2	3	108.7	3	9.9	9.8	36.1	38.9	24	-9	-1	9962	2.46
nnett	876.6	4	78.7	19	9.0	7.9	14.9	21.5	19	-2	2	7716	2.81
ght-Ridder	603.9	3	30.4	31	5.0	4.0	10.5	12.5	21	9	-2	3222	2.82
Graw-Hill	559.8	20	15.0	-2	2.7	3.3	1.0	1.4	NM	-1	-25	3218	0.22
dia General	149.4	4	4.0	16	2.6	2.4	7.0	11.6	22	4	16	571	1.00
redith (6)	205.8	4	7.2	35	3.5	2.7	6.5	9.9	23	-5	-29	611	1.89
w York Times	589.5	30	17.7	63	3.0	2.4	0.7	0.8	NM	9	-46	2765	0.18
olastic (7)	150.3	14	6.4	0	4.3	4.9	NA	17.5	17	NA	82	550	2.03
ipps (E. W.)	285.8	1	25.1	-23	8.8	11.5	13.1	14.1	16	6	12	1953	1.63
e Warner †	3485.0	6	-51.0	NM	NM	NM	-1.5	-15.5	NM	2	NA	13430	-0.56
nes Mirror	856.7	-1	22.7	-16	2.7	3.1	6.9	8.4	25	1	-23	4051	1.24
une	482.8	11	40.1	35	8.3	6.8	12.6	17.4	22	-3	-6	4069	2.71
shington Post	358.5	-1	28.8	1	8.0	7.9	13.4	14.2	17	4	-10	2624	13.14
RVICE INDUSTRIES													
USTRY COMPOSITE	**20906.6**	**11**	**742.7**	**86**	**3.6**	**2.1**	**7.5**	**10.9**	**26**	**11**	**6**	**59927**	**0.99**
NSTRUCTION & ENGINEERING													
OUP COMPOSITE	**4197.1**	**4**	**87.8**	**6**	**2.1**	**2.1**	**12.9**	**14.3**	**21**	**9**	**16**	**8008**	**1.56**
ogee Enterprises (10)	179.4	20	-3.0	NM	NM	0.2	3.7	2.8	53	10	-15	175	0.25
&G	676.5	4	14.4	-25	2.1	2.9	16.5	15.7	11	9	6	856	1.33
or (2)	2057.7	14	44.0	23	2.1	2.0	15.8	16.2	24	11	19	4173	2.13
ster Wheeler	469.6	-20	15.4	21	3.3	2.2	9.9	15.1	24	-3	14	1423	1.69
cobs Engineering Group (3)	272.6	-5	7.3	1	2.7	2.5	16.4	16.1	19	35	29	555	1.18
rrison Knudsen	541.3**	-3	9.7	22	1.8	1.4	8.7	9.2	22	14	-15	826	1.20
DUSTRIAL DISTRIBUTION													
OUP COMPOSITE	**6503.3**	**22**	**228.6**	**20**	**3.5**	**3.6**	**12.1**	**14.0**	**21**	**13**	**3**	**16999**	**1.45**
them Electronics	183.7	29	5.8	4	3.2	3.9	8.6	8.6	17	22	11	305	1.48
row Electronics	820.8	49	25.3	40	3.1	3.3	13.6	18.2	13	28	50	1146	2.82
arings (6)	239.7	14	2.9	21	1.2	1.1	6.5	7.8	23	0	-15	243	1.46
emed	152.1	26	5.7	39	3.7	3.4	10.6	13.7	17	5	-5	314	1.92
nuine Parts	1162.1	12	62.9	12	5.4	5.4	17.6	18.4	16	10	5	4319	2.14
tty Petroleum (11)	195.0**	-12	6.9	1	3.5	3.1	10.2	11.0	21	-3	NA	196	0.74
ainger (W. W.)	706.4	17	41.5	22	5.9	5.6	16.2	16.6	20	8	7	3111	3.04

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
Hughes Supply (11)	169.5	23	2.0	106	1.2	0.7	NA	7.0	20	-1	-26	125	1.36
Kaman	198.0**	0	4.2	6	2.1	2.0	NM	-17.6	NM	1	NA	165	-1.69
Marshall Industries (7)	197.6	26	7.8	68	4.0	3.0	12.3	14.1	14	12	4	422	1.80
Office Depot	994.8	71	22.9	62	2.3	2.4	8.4	13.0	46	76	45	3249	0.75
Premier Industrial (7)	177.9	6	20.7	4	11.6	11.9	21.0	22.2	20	10	7	1826	1.07
Staples (11)	328.4	25	13.5	28	4.1	4.0	7.7	9.6	37	45	40	914	0.71
United Stationers (4)	370.0	-2	3.8	-31	1.0	1.5	10.2	8.4	13	9	-11	260	1.10
Univar (10)	410.1	-1	-0.2	NM	NM	0.1	3.7	3.4	35	12	-18	192	0.28
Wyle Laboratories (11)	197.2	NA	2.8	NA	1.4	NA	NA	7.9	NA	11	18	215	NA
(c) **POLLUTION CONTROL**													
GROUP COMPOSITE	**3193.6**	**7**	**186.5**	**-21**	**5.8**	**8.0**	**3.0**	**3.2**	**83**	**14**	**2**	**15591**	**0.24**
Chemical Waste Management	523.4	6	9 8	-54	1.9	4.3	NM	-44.9	NM	6	NA	1751	-1 48
Rust International	386.1	10	14.0	-16	3.6	4.7	NA	8.8	18	49	-15	1390	0.94
WMX Technologies	2284.1	7	162.6	-18	7.1	9.3	5.8	10.0	30	14	2	12449	0.87
(d) **PRINTING & ADVERTISING**													
GROUP COMPOSITE	**2285.5**	**11**	**86.7**	**531**	**3.8**	**0.7**	**12.6**	**15.9**	**18**	**10**	**5**	**9052**	**1.67**
ADVO (3)	229.7	8	2.4	14	1.0	1.0	6.5	6.4	74	29	-3	365	0.23
Banta	187.5	16	9.6	16	5.1	5.1	12.8	14.5	16	11	12	685	2.09
Donnelley (R. R.) & Sons	1070.9	12	42.8	NM	4.0	NM	9.8	13.2	17	8	-2	4231	1.58
Interpublic Group	421.0**	8	13.0	18	3.1	2.8	18.6	22.6	17	11	13	2208	1.69
Omnicom Group	376.5	11	18.9	31	5.0	4.3	17.7	22.3	16	13	11	1563	2.86
(e) **OTHER SERVICES**													
GROUP COMPOSITE	**4727.0**	**10**	**153.3**	**NM**	**3.2**	**NM**	**6.4**	**11.3**	**25**	**8**	**8**	**10278**	**0.94**
ABM Industries (2)	210.8**	13	2.8	20	1.3	1.3	10.3	11.5	12	13	9	162	1 48
Adia Services	269.8**	29	5.4	51	2.0	1.7	NA	10.5	19	13	-9	427	1.78
Borg-Warner Security	439.1	3	4.2	NM	1.0	NM	NM	118.5	12	-34	NA	371	1.40
CDI	249.2	15	3.9	340	1.6	0.4	7.4	9.3	22	6	-24	242	0.55
Handleman (8)	300.0	-11	10.1	-30	3.4	4.3	9.2	11.1	11	12	2	359	1.00
InaCom	399.3	21	2.6	-6	0.7	0.8	10.8	8.3	11	40	-3	128	1.17
Kelly Services	530.2	18	9.2	34	1.7	1.5	12.1	12.1	21	10	-11	982	1.24
Mid Atlantic Medical Services	178.5	11	13.5	157	7.5	3.3	42.9	37.6	33	117	62	1067	1.47
Olsten	537.5**	4	14.3	39	2.7	2.0	NA	-2.6	NM	21	4	1291	-0.22
PHH (8)	516.8	6	15.4	7	3.0	2.9	3.9	12.8	10	7	16	600	3.56
Safety-Kleen	176.8	-3	9.7	12	5.5	4.8	NM	-27.7	NM	14	NA	836	-1.74
Service Corp. International	261.3	16	37.4	28	14.3	13.0	7.0	12.6	18	11	25	2037	1.31
ServiceMaster	657.6	12	24.5	16	3.7	3.6	27.0	51.1	12	NA	17	1777	1.94
22 **TELECOMMUNICATIONS**													
INDUSTRY COMPOSITE	**51355.6**	**6**	**4552.8**	**22**	**8.9**	**7.7**	**8.7**	**13.3**	**23**	**2**	**4**	**303603**	**1.75**
(a) **EQUIPMENT & SERVICES**													
GROUP COMPOSITE	**23600.7**	**8**	**1616.0**	**43**	**6.8**	**5.1**	**14.6**	**20.4**	**20**	**11**	**5**	**113302**	**2.02**
AirTouch Communications †	257.3	8	27.5	NM	10.7	NM	3.5	2.1	NM	NA	NA	11266	0.16
AT&T	16560.0	5	1094.0	17	6.6	6.0	20.4	29.8	17	7	5	70832	3.04
Comsat	169.5	2	18.3	0	10.8	11.0	8.4	10.7	12	4	-2	860	1.82
DSC Communications	200.9	29	29.6	160	14.7	7.3	14.8	14.6	32	12	8	3150	1.79
MCI Communications	3221.0	15	209.0	24	6.5	6.0	10.1	14.2	20	25	10	12578	1.16
Sprint	3033.2	12	227.4	NM	7.5	NM	10.2	18.3	18	14	12	12792	2.07
Telephone & Data Systems	158.8	30	10.2	50	6.4	5.6	NA	2.9	52	45	17	1824	0.71
(b) **TELEPHONE COMPANIES**													
GROUP COMPOSITE	**27754.9**	**4**	**2936.7**	**12**	**10.6**	**9.8**	**6.9**	**10.5**	**26**	**0**	**-5**	**190301**	**1.59**
Alltel	709.4	30	71.9	14	10.1	11.6	9.1	17.1	19	14	6	5046	1.43
Ameritech	2990.4	7	43.8	-85	1.5	10.7	11.1	16.0	18	-1	3	22822	2.31
Bell Atlantic	3373.2	7	395.9	6	11.7	11.8	10.5	18.3	16	-3	2	23439	3.45
BellSouth	4124.3	8	585.3	42	14.2	10.7	6.6	8.8	25	2	-8	30323	2.43
Cincinnati Bell	292.1	11	15.6	-25	5.4	7.9	NM	-12.2	NM	2	NA	1121	-1.01
GTE	4746.0	-2	504.0	10	10.6	9.5	6.9	10.7	30	5	-9	30337	1.07
Nynex	3273.3	-1	290.6	-12	8.9	10.0	NM	-3.7	NM	-1	NA	14832	-0.76
Pacific Telesis Group	2294.0	0	282.0	NM	12.3	0.3	7.0	9.3	28	0	-23	13538	1.15
Rochester Telephone	241.8	15	22.4	24	9.3	8.5	9.0	13.2	18	15	3	1537	2.52
Southern New England Telecomms.	423.2**	5	43.5	19	10.3	9.1	NM	-4.2	NM	-4	NA	2003	-0.57
Southwestern Bell	2646.2	8	357.7	18	13.5	12.3	11.6	19.6	17	-1	6	25660	2.47
US West	2641.0	5	324.0	10	12.3	11.8	6.4	7.9	38	-4	-16	19641	1.15
23 **TRANSPORTATION**													
INDUSTRY COMPOSITE	**32857.6**	**7**	**442.9**	**NM**	**1.3**	**NM**	**4.6**	**7.4**	**29**	**0**	**6**	**80807**	**1.37**
(a) **AIRLINES**													
GROUP COMPOSITE	**13816.4**	**4**	**-420.9**	**NM**	**NM**	**NM**	**-1.2**	**-13.7**	**NM**	**-1**	**NM**	**15946**	**-1.97**
Alaska Air Group	280.4	12	-6.3	NM	NM	NM	NM	-14.3	NM	-13	NA	200	-1.72
America West Airlines	345.3	9	15.2	611	4.4	0.7	72.5	NM	1	NA	NA	73	1.94
AMR	3808.0	0	-7.0	NM	NM	NM	NM	-4.6	NM	-1	NA	4321	-1.92
Delta Air Lines (6)	2943.0	1	-77.9	NM	NM	NM	NM	-14.7	NM	5	NA	2121	-5.22
MGM Grand	178.9	NM	3.4	NM	1.9	NM	NM	-23.1	NM	22	NA	1264	-2.32
Southwest Airlines	619.4	24	41 8	68	6.8	5.0	10.9	16.2	27	13	15	4408	1.16

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE OUTSTANDING SHARES 4-22 $ MIL	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %		
Trans World Airlines	760.6**	8	-122.4	NM	NM	NM	NM	NM	NA	NA	NA	79	NA
UAL	3195.0	5	-71.0	NM	NM	NM	6.1	-0.1	NM	-7	NA	3096	-0.05
USAir Group	1685.9	-2	-196.7	NM	NM	NM	NM	NM	NM	NA	NA	385	-9.67
RAILROADS													
GROUP COMPOSITE	**9171.7**	**5**	**695.3**	**18**	**7.6**	**6.7**	**7.4**	**13.6**	**18**	**0**	**9**	**48577**	**2.69**
Burlington Northern	1210.0	3	87.0	6	7.2	7.0	8.1	17.6	18	10	2	4950	3.10
Conrail	847.0	4	-32.0	NM	NM	5.6	4.4	4.9	32	-9	13	4486	1.76
CSX	2227.0	5	74.0	NM	3.3	NM	7.0	13.6	18	-1	-28	8178	4.26
Illinois Central	147.5	3	27.7	15	18.8	16.8	12.5	24.1	16	124	93	1508	2.23
Kansas City Southern Industries	265.1**	24	27.6	25	10.4	10.3	9.5	18.4	19	13	24	1894	2.28
Norfolk Southern	1076.8**	-3	144.9	4	13.5	12.5	7.4	12.0	15	-4	-5	8552	4.00
Santa Fe Pacific	722.1	11	68.1	-46	9.4	19.5	9.4	20.8	15	16	2	4199	1.50
Southern Pacific Rail	748.2	11	15.0	NM	2.0	NM	NM	-8.6	NM	NA	NA	2910	-0.21
Union Pacific	1928.0	5	283.0	73	14.7	9.0	8.9	16.9	14	3	0	11899	4.01
TRANSPORTATION SERVICES													
GROUP COMPOSITE	**4688.0**	**9**	**97.4**	**48**	**2.1**	**1.5**	**7.3**	**11.3**	**18**	**2**	**-17**	**8466**	**2.09**
Air Express International	204.8	34	3.5	1	1.7	2.3	12.5	22.2	14	18	19	245	1.49
Airborne Freight	466.6	17	7.0	93	1.5	0.9	6.8	11.3	18	20	-4	639	1.83
Aviall	195.6	-9	1.3	-79	0.7	2.8	NA	NA	NA	NA	NA	NA	NA
Federal Express (7)	2077.4	7	31.2	267	1.5	0.4	7.9	10.1	22	4	-24	3992	3.23
GATX	260.7**	10	20.2	9	7.7	7.8	6.4	10.4	13	13	-9	776	3.05
Pittston Services Group	411.1**	13	10.5	94	2.6	1.5	12.2	14.6	17	NA	22	979	1.40
Ryder System	1071.8	7	23.7	19	2.2	2.0	6.5	11.9	16	-6	6	1836	1.50
TRUCKING & SHIPPING													
GROUP COMPOSITE	**5181.5**	**16**	**71.2**	**4**	**1.4**	**1.5**	**7.4**	**10.4**	**18**	**3**	**NM**	**7818**	**1.41**
Alexander & Baldwin	254.4**	36	16.9	-6	6.6	9.7	5.5	11.2	17	-1	-18	1137	1.43
American President	703.1**	11	10.2	-16	1.5	1.9	9.5	15.0	8	-5	9	564	2.55
Arkansas Best	265.0	16	5.6	158	2.1	0.9	10.2	9.9	11	54	173	225	1.05
Carolina Freight	192.6	3	-2.9	NM	NM	NM	NA	NA	NM	-2	NA	76	-1.03
Consolidated Freightways	1103.2	11	15.3	85	1.4	0.8	7.0	7.9	22	-9	NA	830	1.06
Hunt (J. B.) Transport Services	264.7	7	5.7	15	2.2	2.0	6.2	11.3	21	19	3	816	1.02
Landstar System	207.2	21	3.3	NM	1.6	0.0	17.0	20.8	18	NA	NA	308	1.35
Mayflower Group	168.7	10	1.7	79	1.0	0.6	NA	3.8	33	35	NA	104	0.25
Roadway Services	1023.7	20	15.9	-21	1.6	2.4	10.4	11.0	23	10	10	2652	2.91
RNT Freightways	250.7	21	5.9	49	2.4	1.9	NA	17.5	17	NA	NA	510	1.39
Yellow	748.2	24	-6.4	NM	NM	NM	3.1	2.9	42	3	-13	594	0.50
UTILITIES & POWER													
INDUSTRY COMPOSITE	**43288.5**	**6**	**4240.9**	**-2**	**9.8**	**10.6**	**5.7**	**9.4**	**16**	**3**	**2**	**188612**	**1.63**
ELECTRIC, WATER & COGENERATION													
GROUP COMPOSITE	**35388.3**	**6**	**3575.7**	**-1**	**10.1**	**10.8**	**5.5**	**9.1**	**16**	**3**	**1**	**166080**	**1.65**
Allegheny Power System	704.3	15	83.2	16	11.8	11.7	6.6	11.6	12	5	-1	2736	1.96
American Electric Power	1488.0	13	167.2	13	11.2	11.2	5.4	9.0	16	-1	-9	5928	2.02
Baltimore Gas & Electric	748.3	9	82.1	25	11.0	9.6	6.4	10.9	12	7	-4	3487	1.96
Carolina Power & Light	744.5	5	88.8	-6	11.9	13.3	6.7	12.6	12	3	13	4179	2.10
Centerior Energy	588.0	-2	52.0	1	8.8	8.6	NM	-52.8	NM	-1	-11	1691	-6.46
Central & South West	850.0	5	48.0	4	5.6	5.7	5.4	9.0	18	3	-1	4734	1.39
Central Maine Power	241.0	2	11.4	-47	4.7	9.1	5.8	7.8	10	9	0	400	1.31
Cincinnati Gas & Electric	562.5	14	76.2	11	13.5	13.9	0.0	-1.7	NM	7	NA	2069	-0.29
Cipsco	225.6	7	14.7	-17	6.5	8.3	7.0	13.0	12	1	2	1015	2.42
CMS Energy	1142.0	9	81.0	8	7.1	7.2	7.6	16.7	12	-16	NA	1885	1.92
Commonwealth Edison	1524.8	3	51.6	-24	3.4	4.5	3.0	0.4	NM	-5	-37	5397	0.10
Consolidated Edison Co. of N.Y.	1697.8	7	189.3	23	11.2	9.7	7.4	13.0	11	4	1	7119	2.81
Destec Energy	177.0	40	20.6	-12	11.6	18.4	14.6	15.2	7	74	NA	732	1.63
Detroit Edison	899.6	3	112.9	-17	12.5	15.5	7.1	14.3	8	9	6	3897	3.19
Dominion Resources	1167.0	6	151.4	14	13.0	12.1	7.1	12.1	13	7	0	7019	3.21
DPL	375.2	7	57.5	3	15.3	15.9	7.5	13.7	15	3	-1	2200	1.42
DQE	318.6	9	39.6	16	12.4	11.7	5.5	11.9	12	3	8	1710	2.77
Duke Power	1055.2	5	173.6	23	16.5	14.1	7.5	14.0	12	5	4	7401	2.96
Florida Progress	629.3	28	38.9	4	6.2	7.6	6.4	10.9	13	NA	-2	2655	2.23
IPL Group	1178.9	4	104.5	1	8.9	9.1	6.8	10.5	15	4	-7	6581	2.32
General Public Utilities	937.2	6	128.4	46	13.7	10.0	7.2	13.0	10	5	0	3550	3.00
Hawaiian Electric Industries	265.0	-5	13.6	24	5.1	3.9	5.7	10.0	14	6	-4	934	2.42
IES Industries	211.6	-1	15.4	9	7.3	6.6	6.9	12.1	12	18	-4	810	2.45
Illinois Power	442.9	12	33.2	19	7.5	7.1	NM	-5.7	NM	-6	NA	1683	-1.00
Ipalco Enterprises	181.2	7	31.2	2	17.2	18.1	6.3	9.6	16	3	-4	1206	2.01
Kansas City Power & Light	199.3	4	9.9	-37	5.0	8.3	5.5	11.2	15	1	1	1401	1.56
KU Energy	166.5	8	25.7	5	15.4	15.9	7.6	13.5	13	4	1	1026	2.15
LG&E Energy	244.5	3	-18.6	NM	NM	8.5	4.0	5.8	29	5	1	1236	1.29
Nevada Power	144.7	9	4.7	-44	3.2	6.3	6.4	10.2	14	12	-1	908	1.62
New England Electric System	576.9	0	71.6	27	12.4	9.7	7.2	13.5	12	7	1	2420	3.17
New York State Electric & Gas	565.2	8	84.7	14	15.0	14.2	6.0	9.7	12	7	-5	1915	2.22
Ohio Edison	601.2	1	69.3	1	11.5	11.6	2.2	0.1	NM	-2	-55	2842	0.01
Orange & Rockland Utilities	292.7	11	14.1	-7	4.8	5.7	6.7	10.8	12	5	0	465	2.99
Pacific Gas & Electric	2463.0	0	237.0	-7	9.6	10.4	6.5	11.7	12	4	6	11749	2.29

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CORPORATE SCOREBOARD

COMPANY	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4-22	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 $ MIL.	CHANGE FROM 1993 %	1ST QUARTER 1994 %	1ST QUARTER 1993 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-22	COMMON EQUITY %	EARNINGS PER SHARE %	$ MIL	
PECO Energy	1128.4	5	159.4	−2	14.1	15.2	6.4	12.7	12	3	9	6313	2.44
Pinnacle West Capital	374.6	0	29.1	−18	7.8	9.4	5.6	10.0	11	−3	73	1792	1.88
Portland General	278.0	0	42.2	6	15.2	14.3	5.9	12.1	10	−3	−3	869	1.92
Public Service Co. of Colorado	612.4	1	46.5	−21	7.6	9.7	7.9	11.2	13	7	0	1783	2.21
Public Service Co. of New Mexico	260.8	5	24.1	102	9.2	4.8	NM	−10.1	NM	−6	NA	543	−1.34
Public Service Enterprise Group	1794.4	13	239.9	10	13.4	13.7	7.0	12.0	11	5	−2	6884	2.54
Puget Sound Power & Light	329.2	2	46.5	−15	14.1	16.9	6.3	9.6	11	6	0	1312	1.84
Rochester Gas & Electric	310.1	14	34.2	18	11.0	10.7	NA	10.5	12	6	−3	918	2.11
SCEcorp	1728.7	−3	142.4	−11	8.2	8.9	6.0	10.5	11	3	−4	6997	1.39
Sierra Pacific Resources	154.0	11	17.0	13	11.0	10.7	6.3	9.6	11	5	−8	537	1.68
Southern	1932.0	5	165.0	−18	8.5	10.9	7.1	12.6	13	3	4	12773	1.51
Southwestern Public Service (4)	189.4	5	17.4	−21	9.2	12.2	8.0	14.2	12	2	−1	1166	2.38
Teco Energy	306.6	9	34.5	34	11.3	9.1	8.3	15.5	15	4	4	2356	1.38
Texas Utilities	1301.4	14	94.9	−48	7.3	16.0	4.6	4.3	29	2	−16	8217	1.26
Union Electric	438.9	−3	38.2	−14	8.7	9.8	6.5	12.6	13	3	2	3574	2.72
United Illuminating	167.6	3	13.2	5	7.9	7.8	5.3	8.7	14	0	−10	516	2.61
Washington Water Power	190.9	−10	26.7	−26	14.0	16.9	6.2	10.3	14	7	1	917	1.25
Wheelabrator Technologies	281.3	15	40.1	20	14.3	13.6	8.9	13.2	22	31	31	3634	0.89
(b)**GAS, OIL & TRANSMISSION GROUP COMPOSITE**	**7900.2**	**9**	**665.2**	**−9**	**8.4**	**10.0**	**7.1**	**11.7**	**17**	**4**	**28**	**22533**	**1.51**
Bay State Gas (3)	205.6	20	22.8	11	11.1	12.0	6.8	11.1	14	13	−3	333	1.80
El Paso Natural Gas	221.9	5	21.1	−32	9.5	14.6	7.1	11.6	17	−19	NA	1392	2.20
Enron	2449.7	32	173.1	18	7.1	7.9	8.0	13.9	21	13	19	7535	1.42
MCN	656.8	18	69.3	28	10.6	9.7	9.9	18.5	13	12	1	1139	2.99
Nicor	780.3	16	51.3	11	6.6	6.9	10.0	16.1	13	3	1	1450	2.07
Oneok (4)	295.4	−6	26.4	−16	8.9	10.0	NA	9.6	13	3	29	466	1.31
Panhandle Eastern	517.3	−16	58.8	−15	11.4	11.3	5.9	8.3	18	11	12	2505	1.17
Petroleum Heat & Power	266.8	6	51.4	32	19.3	15.5	NM	NM	94	NA	NA	163	0.08
Piedmont Natural Gas (2)	233.1	15	27.7	2	11.9	13.4	7.9	13.4	14	12	3	526	1.46
Questar	223.3	−9	30.9	−14	13.9	14.6	9.1	13.1	16	6	22	1255	1.97
Sonat	479.5	−4	49.6	−28	10.3	13.9	13.5	18.0	10	3	14	2560	2.83
Transco Energy	834.1	7	29.5	28	3.5	3.0	NM	−13.6	NM	−8	NA	605	−1.38
USX-Delhi Group	154.4	18	0.4	−95	0.3	6.6	1.7	1.8	34	NA	NA	129	0.41
Williams	582.0	−22	52.8	−58	9.1	16.7	6.6	9.2	17	11	54	2474	1.44

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The number following each company name identifies the Scoreboard category under which it is listed

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ABM Industries **21e**
ACX Technologies **7b**
Adia Services **21e**
Advanced Micro **9d**
ADVO **21d**
Aetna Life & Casualty **17b**
AFLAC **17b**
Ahmanson (H F) **17c**
Air Express Intl **23c**
Air Products & Chemicals **4**
Airborne Freight **23c**
AirTouch Communs **22a**
Alaska Air Group **23a**
Albertson's **10c**
Alco Standard **5**
Alcoa **16a**
Alexander & Alexander **17a**
Alexander & Baldwin **23d**
Alex. Brown **17a**
Alleghany **17a**
Allegheny Ludlum **16b**
Allegheny Power **24a**
Allergan **12b**
AlliedSignal **5**
Allstate **17b**
Alltel **22b**
Alumax **16a**
Amdahl **18b**
Amerada Hess **11a**
America West **23a**
American Bankers Ins. **17b**
American Brands **6e**
American Cyanamid **12b**
American Electric **24a**
American Express **17a**
American General **17b**
American Greetings **14d**
American Home **12b**
American Intl. Group **17b**
American Medical **12c**
American National **17b**
American President **23d**
American Stores **10c**
Amentech **22b**
Ames Dept. Stores **8**
Ametek **9a**
Amgen **12b**
Amoco **11a**
AMP **9d**
Amphenol **9d**
AMR **23a**
AmSouth Bancorporation **3c**
Analog Devices **9d**
Anheuser-Busch **6c**
Anthem Electronics **21b**
Apogee Enterprises **21a**
Apple Computer **18b**
Applied Materials **15c**
Arbor Drugs **12a**
Arco Chemical **4**
Arkansas Best **23d**
Armco **16b**
Armstrong World **6b**
Arrow Electronics **21b**
Arvin Industries **2b**
Asarco **16c**
Ashland Oil **11a**
AST Research **18b**
AT&T **22a**
AT&T Capital **17a**
Atlantic Richfield **11a**
Automatic Data **18c**
AutoZone **8**
Avery Dennison **15a**
Aviall **23c**
Avon Products **6d**

B

Baker (J) **8**
Baker Hughes **11b**
Ball **7a**
Baltimore G&E **24a**
Banc One **3b**
Bancorp Hawaii **3d**
Bank of Boston **3a**
Bank of New York **3a**
BankAmerica **3d**
Bankers Life Holding **17b**
Bankers Trust **3a**
Banta **21d**
Bard (C R) **12d**
Barnes & Noble **8**
Barnett Banks **3c**
Bausch & Lomb **12d**
Baxter International **12d**
Bay State Gas **24b**
Bear Stearns **17a**
Bearings **21b**
Beckman Instruments **9c**
Becton, Dickinson **12d**
Bell Atlantic **22b**
BellSouth **22b**
Bemis **7b**
Bergen Brunswig **12a**
Best Buy **6b**
Bethlehem Steel **16b**
Beverly Enterprises **12c**
Big B **12a**
Bindley Western Inds **12a**
Birmingham Steel **16b**
Black & Decker **15b**
Block (H&R) **17a**
Blockbuster Ent **14b**
Boatmen's Bancshares **3b**
Bob Evans Farms **14a**
Boeing **1**
Boise Cascade **19a**
Borden **10b**
Borg-Warner Automotive **2b**
Borg-Warner Security **21e**
Bowater **19b**
Bradlees **8**
Briggs & Stratton **15c**
Brinker International **14a**
Bristol-Myers Squibb **12b**
Brown Group **6a**
Brown-Forman **6c**
Brunswick **14d**
Burlington Northern **23b**
Burlington Resources **11a**

C

Cabletron Systems **18c**
Caesars World **14c**
Caldor **8**
Campbell Soup **10b**
Capital Cities/ABC **20a**
Cardinal Health **12a**
Caremark Intl **12c**
Carlisle **15a**
Carnival **14d**
Carolina Freight **23d**
Carolina Power **24a**
Carpenter Tech. **16b**
Carson Pirie Scott **8**
Carter Hawley Hale **8**
Casey's General Stores **10c**
Caterpillar **15c**
CBS **20a**
CDI **21e**
Centerior Energy **24a**
Centex **13b**
Central & South West **24a**
Central Maine Power **24a**
Ceridian **18c**
Champion Intl **19b**
Charming Shoppes **8**
Chase Manhattan **3a**
Chemed **21b**
Chemical Banking **3a**
Chemical Waste **21c**
Chesapeake **19b**
Chevron **11a**
Chrysler **2a**
Cincinnati Bell **22b**
Cincinnati G&E **24a**
Cincinnati Milacron **15b**
Cipsco **24a**
Circuit City Stores **6b**
Circus Circus **14c**
Cirrus Logic **18c**
Cisco Systems **18c**
Citicorp **3a**
Clark Equipment **15c**
Clayton Homes **13b**
Clorox **6d**
CML Group **14d**
CMS Energy **24a**
Coastal **11a**
Coca-Cola **6c**
Coca-Cola Bottling **6c**
Coca-Cola Enterprises **6c**
Coleman **9a**
Colgate-Palmolive **6d**
Coltec Industries **5**
Columbia/HCA **12d**
Comdisco **18c**
Comerica **3b**
Commerce Clearing **20b**
Commercial Metals **16b**
Commonwealth Ed **24a**
Compaq Computer **18b**
CompuCom Systems **18a**
CompUSA **18c**
Computervision **18c**
Comsat **22a**
ConAgra **10b**
Cone Mills **15d**
Conner Peripherals **18b**
Conrail **23b**
Consolidated Edison **24a**
Cons. Freightways **23d**
Consolidated Papers **19b**
Consolidated Stores **8**
Continental Bank **3b**
Continental Medical **12c**
Control Data Systems **18b**
Cooper Industries **9a**
Cooper Tire & Rubber **2c**
Coors (Adolph) **6c**
CoreStates Financial **3a**
Corning **15a**
Countrywide Credit **17a**
CPC International **10b**
CPI **14d**
Cracker Barrel **14a**
Crane **15a**
Crawford **17a**
Cray Research **18b**
Crestar Financial **3c**
Crown Cork & Seal **7a**
CSX **23b**
CUC International **18a**
Culbro **6e**
Cummins Engine **2b**
Curtice-Burns Food **10b**
Cyprus Amax Minerals **16c**

D

Dana **2b**
Danaher **15b**
Data General **18b**
Dayton Hudson **8**
Dean Foods **10b**
Dean Witter, Discover **17a**
Deere **15c**
Dekalb Genetics **10b**
Delchamps **10c**
Dell Computer **18b**
Delta Air Lines **23a**
Deluxe **18a**
Destec Energy **24a**
Detroit Diesel **2b**
Detroit Edison **24a**
Dexter **4**
Dial **5**
Diamond Shamrock **11a**
Diebold **18a**
Digital Equipment **18b**
Dillard **8**
Disney (Walt) **14b**
Dole Food **10b**
Dollar General **8**
Dominion Resources **24a**
Donnelley (R. R.) **21d**
Dover **15c**
Dow Chemical **4**
Dow Jones **20b**
DPL **24a**
DQE **24a**
Dr Pepper/Seven-Up **6c**
Dresser Industries **15c**
Drug Emporium **12a**
DSC Communs **22a**
Duke Power **24a**
Dun & Bradstreet **20b**
DuPont **4**
Duty Free Intl. **8**

E

E-Systems **9b**
Eagle Food Centers **10c**
Eagle-Picher Industries **2b**
Eastman Chemical **4**
Eastman Kodak **14d**
Eaton **2b**
Echlin **2b**
Eckerd **12a**
Ecolab **6d**
Edison Brothers **8**
Edwards (A. G.) **17a**
EG&G **21a**
El Paso Natural Gas **24b**
Electronic Data Systems **18**
EMC **18b**
Emerson Electric **9a**
Engelhard **4**
Enron **24b**
Enron Oil & Gas **11a**
Equifax **17a**
Ethyl **4**
Excel Industries **2b**
Exxon **11a**

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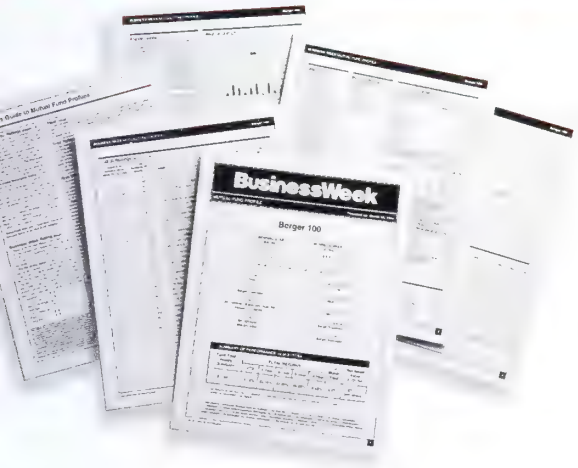

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Standard Products 2b
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Wheelabrator Techs
Wheeling-Pittsburgh
Whirlpool 6b
Whitman 5
Willamette Industries
Williams 24b
Williams-Sonoma 6b
Winn-Dixie Stores 10
Witco 4
WLR Foods 10b
WMX Technologies
Woolworth 8
Worthington Inds 16
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ongratulations to the winners of

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for Excellence in

Corporate Advertising

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The winners were determined based on 1993 advertising readership scores compiled for every issue of Business Week by Starch INRA Hooper. Starch is an independent research firm and the acknowledged readership measurement standard for the print industry.

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James Fligg, President

Bender, Browning, Dolby & Sanderson, Chicago, IL

From chemistry to candy bars, more global companies choose Citibank than any other bank.

BECAUSE

BECAUSE

BECAUSE

BECAUSE THE CITI NEVER SLEEPS

CITIBANK

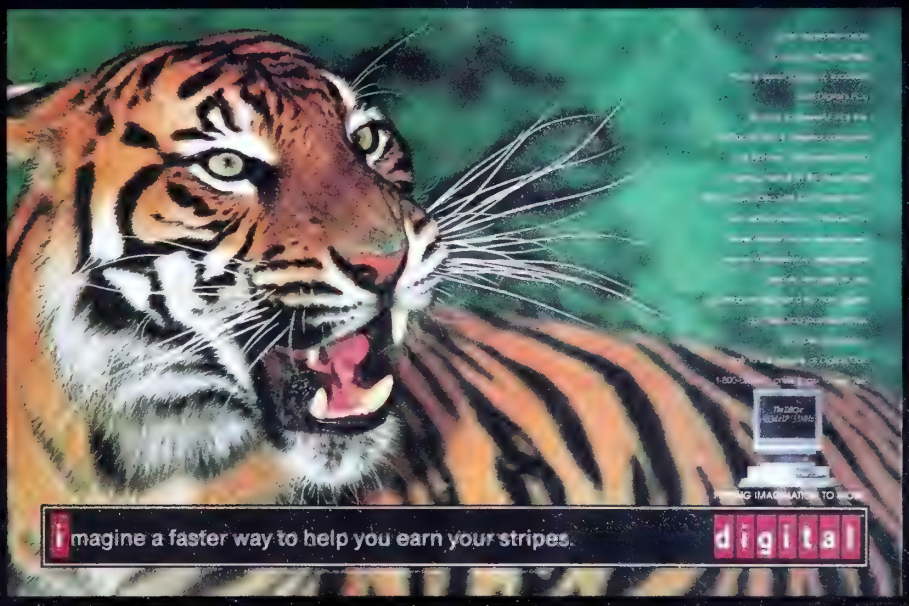
CITIBANK

John S. Reed, Chairman

J. Walter Thompson, New York, NY

DIGITAL EQUIPMENT CORPORATION

Robert B. Palmer, President & CEO
Ciociola & Company, New York, NY



FORTIS, INC.

Allen Freedman, Chairman & CEO
Ciociola & Company, New York, NY

FUJITSU LTD.

Tadashi Sekizawa, President
Asian Advertisers, Inc., Tokyo, Japan

IBM CORPORATION

Louis V. Gerstner Jr., Chairman & CEO
Wells Rich Greene BDDP, New York, NY

NORFOLK SOUTHERN CORPORATION

David R. Goode, Chairman, President & CEO
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SIEMENS

1891. That was then.

1993. This is now.

Siemens. Precision Thinking.

SIEMENS CORPORATION

Albert Hoser, President & CEO

SPRINT

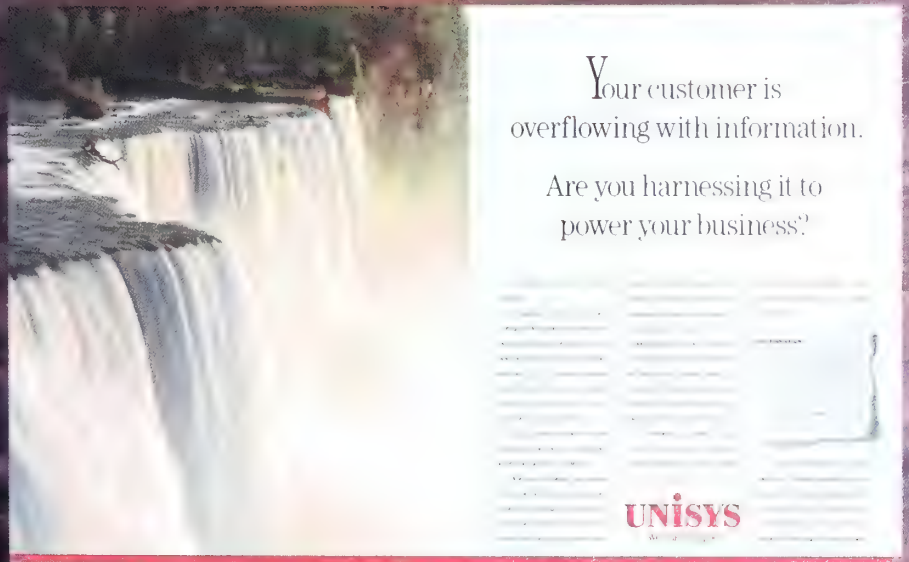
William T. Esrey, Chairman & CEO
J. Walter Thompson, San Francisco, CA

SUN MICROSYSTEMS, INC.

Scott McNealy, President, Chairman & CEO
Anderson & Lembke, San Francisco, CA

TANDEM

James G. Treybig, President & CEO
Foote, Cone & Belding Technology Group, San Francisco, CA



UNISYS CORPORATION

James A. Unruh, Chairman & CEO
Bozell Worldwide, Inc., New York, NY

1992

AKZO NV
American International Group
Amoco Chemical
Andersen Consulting
Cigna
Digital Equipment
Eastman Kodak
Fujitsu
Hitachi
IBM
Norfolk Southern
Siemens
Timken
Unisys

1990

Amoco Chemical
Boeing
BP America
Digital Equipment
Eastman Kodak
Hitachi
Intel
Novell
Raytheon
Siemens
Timken
Westinghouse

Past Winners of the Business Week Awards for Excellence in Corporate Advertising

1991

Amoco Chemical
Cigna
Digital Equipment
Fujitsu
Hitachi
Lockheed
Norfolk Southern
Samsung
Siemens
Timken
Unisys
US Postal Service

1989

Amoco Chemical
Andersen Consulting
Bull
Chemical Bank
Digital Equipment
Eastman Kodak
Fujitsu
Lockheed
Schott Glaswerke
Texas Instruments
Timken
Unisys

BusinessWeek
Beyond news. Intelligence.

NTHROPISTS

RAINMAKER OR HUMAN RIGHTS

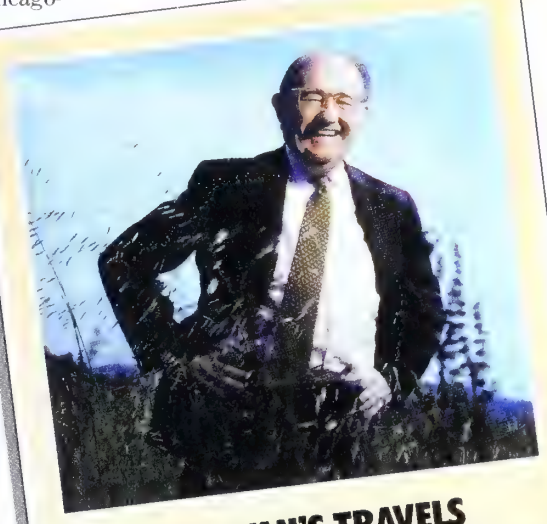
Sullivan's passion for doing good rivals his success in doing deals

s planting time in the Midwest gain, and after last year's epic del-ge, farmers and agriculture execu- alike are praying for sunny skies. h P. Sullivan is praying, too. But making and marketing fertilizer) years, the chairman of Chicago-Vigoro Corp. knows isn't much to be done the weather.

livan reserves most of retting these days for maelstrom of human- s abuses sweeping s the globe. There are who would say the ems of Bosnia, Rwanda, lia, and Central America s intractable as a stub-low-pressure system. But an has spent large por- of his time and $2 million the past four years try- right the swelling flood of gs. "It's very difficult to sense of it," says the chy, 61-year-old executive y. "But the bottom line is e got to keep trying and ing for basic human rights."

TICAL IDEALIST. Joe Sullivan are commodity on the Amer- business scene. On the one he's a savvy '80s-style deal- r who made millions by suc- lly playing the leveraged-buy- game. On the other, he's a n-bred liberal idealist who has lavishly to further the causes elieves in, from human rights migrant aid to Democratic poli- "He's a very practical business- with an uncommon sense of pub- ervice," says longtime friend tor Paul Simon (D-Ill.). "He n't want his tombstone to read: Sullivan made lots of bucks.'"

llivan certainly has made money. tarted in the late 1950s as a junior utive in the fertilizer business of was then known as Swift & Co. se quickly as Chairman Donald P. —one of the deal era's most prolif- quisitors—built Swift into a booming food conglomerate called Esmark Inc. By 1980, Sullivan was head of Esmark's biggest unit and Kelly's heir apparent. But in 1983, he left with fellow Esmark executive Jay D. Proops to make acquisitions.



SULLIVAN'S TRAVELS

BORN Apr. 10, 1933 in Boston.

EDUCATION Harvard University, BA—history (1954), Harvard business school, MBA (1956).

ESMARK Joins agriculture chemical unit of Esmark's predecessor, Swift & Co., in 1959. Chairman Don Kelly names him CEO of Esmark's then-ailing food unit in 1980.

VIGORO Resigns from Esmark in 1983 to start LBO fund with Esmark colleague Jay Proops. In 1985, with backing from Chicago financier Sam Zell, Sullivan begins buying up fertilizer and farm-supply companies. Takes resulting company, Vigoro Corp., public in spring of 1991. His stake: $27 million.

PHILANTHROPY Annual giving budget: $500,000. Major donor to American Refugee Committee and to Travelers & Immigrants Aid. Founder of Jeanne & Joseph Sullivan Program for Human Rights in the Americas at DePaul University, 1992. Staunch supporter of Democratic candidates.

DATA: BUSINESS WEEK

Deftly using the LBO structure—and the backing of Chicago financier Sam Zell—they created Vigoro. Since it went public in 1991, the stock has doubled, and Sullivan's initial $175,000 investment is now worth $27 million.

But all the while, Sullivan stood out as a persistent liberal gadfly within Chicago's staunchly conservative business community. As far back as the '60s, he and his wife, Jeanne, were strong civil-rights proponents and early supporters of Eugene McCarthy's Presidential campaign. "These were not exactly the things guys talked about over cocktails or golf," recalls Chicago consultant Neal Ball, an old friend. Despite his singularity, however, Sullivan got along in both worlds. Ball is a former Nixon Administration press aide and a self-described "bleeding-heart conservative."

LONG HAUL. Sullivan's ability to bridge the gap between the monied set and the activist community is a key component of his success as a rainmaker. Human rights, after all, is an issue most people can agree on. In recent years, he has focused his efforts on the American Refugee Committee (ARC), an organization founded by Ball in 1978. It sends American doctors and nurses to refugee camps around the world to train local medics to help their own populations. Two years ago, fearful that the spotlight on human rights would shift away from Central America as civil wars wound down there, the Sullivans also founded a program at DePaul University to document abuses and train Central American lawyers.

All told, Sullivan gives away the equivalent of his Vigoro salary annually. This year, he and his wife ponied up an extra $100,000 for a $500,000 ARC fund for hot spots such as Bosnia. As they help tap donors for the rest, they will—as always—present the case in business terms. ARC staffers are often asked to dredge up facts such as how much it costs to train a medic in a Thai refugee camp who will return to Cambodia to treat thousands of villagers.

Joe and Jeanne certainly don't skimp on the good life. There are art-filled homes in Chicago, Santa Fe, and La Jolla, Calif. And though Joe lends considerable time and management expertise to favored programs, most of the Sullivans' patron activity doesn't get dirt under their fingernails. Often, they open their Chica-

MICHAEL GREGONIS/SYGMA

SUE HERERA. JANICE LIEBERMAN. WATCHING OUT FOR YOUR MONEY ON *MONEY TONIGHT.*

Want to make more money? Tune in to CNBC's hottest new show, ***Money Tonight*** *and watch your money grow. Hosted by Sue Herera, an expert on personal finance issues, and Janice Lieberman, the award-winning investigative journalist specializing in exposing consumer ripoffs,* ***Money Tonight*** *is the premier show on television about managing your money. And with editors and reporters from* **Business Week** *magazine bringing their expertise to* ***Money Tonight*** *every Thursday, you're guaranteed to profit from tuning in.*

Watch ***Money Tonight****. Because in the game of money, tomorrow's too late.*

BusinessWeek
Beyond news. Intelligence.
is featured on Thursday nights.

MONEY TONIGHT
Monday-Friday
7:30 pm (ET)

Only on

CNBC
FIRST IN BUSINESS
FIRST IN TALK

People

go home or rent out the Ritz-Carlto dining room for an old-fashioned "salon Invited are an eclectic mix of friends- from Chicago ward politicians to UA Corp. Chairman Stephen M. Wolf an retired Admiral Elmo R. Zumwalt. Ther are always featured guests: human-right lawyers from Central America, for in stance, or a teenage theater troupe fro Santa Fe—kids whose families have bee affected by substance abuse. And ther is usually a direct pitch for funds.

"SPEAK UP." Friends trace Sullivan sense of noblesse oblige to his upbring ing in a lower-middle-class Boston neigh borhood filled with Irish and Jewish im migrants. Tales of the Holocaust an the hard-scrabble existence in early 20t century Ireland left a searing impres sion. "You only have one chance in thi world," he says. "If you feel strongly you've got to speak up." He attende Harvard on scholarship and earned a MBA. But "Joe sees business as a mean to an end," says college buddy Desmon R. LaPlace, vice-chairman of ACCO Worl Corp. "It's a way to generate funds t do other things."

That's not to say he doesn't enjoy hi vocation. After leaving Esmark a decad ago, he seriously considered academi or full-time charitable work. What le him back to business, he frankly admits was the thrill of the chase. "Was it fu doing deals? You bet it was," he says.

Now, with many '80s-era LBOs brough down by financial excesses, Sullivan o ten has to defend the process. In March speech to Catholic business lead ers, he tried to dispel the notion that a ethical LBO is an oxymoron. At Vigoro with revenues of about $700 million, h has pushed incentive bonuses to employ ees as far down as those in the compa ny's rural farm-center stores. New-jo training is available, as is counseling fo emotional and substance-abuse problems Vigoro, like many fertilizer companies has been fined for Environmental Pro tection Agency violations despite Sull van's dictum that it will be "environ mentally friendly." But the boss ha since revised internal standards and, fo now, all complaints are settled.

Overall, Sullivan argues that 20 year from now, the good LBOs will be vindi cated. "It will be seen to have helpe make American business competitive he says. He's not so sanguine about th refugee problem. When he joined Ball ARC, the plan was to address an acut need in Cambodia and be done with it i 18 months. "God knows, it's discouragin when you see a Bosnia or a Rwanda," h says. But Joe Sullivan doesn't give i to discouragement easily.

By Richard A. Melcher in Chicag

YEAR ROUND GOLF

COME TO

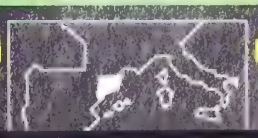
CATALONIA

SPAIN

Catalunya

Consorci de Promoció Turística

Generalitat de Catalunya



EDITED BY AMY DUNKIN

Mutual Funds

'YOU HAVE TO KNOW WHO'S CALLING THE SHOTS'

After portfolio managers Tom Conlin and Mary Kay Bourbulas left SteinRoe's High-Yield Municipal Fund to run Strong Municipal Bond Fund, the fortunes of the two funds reversed. SteinRoe's, which had ranked in the top quartile for national muni funds for four years running, sank into the bottom 2% in 1992, while Strong's anemic fund leapt into the top 1%—and is still way ahead of SteinRoe's.

This is one example of why it's important to know the face behind your fund. Choosing a fund based on long-term performance and investment strategy is sound. But if the manager responsible for those happy returns bolts, you could end up with a dud. "Ultimately, it's the sailors and not the ships that dictate the performance," says Don Phillips, publisher of *Morningstar Mutual Funds*. "You have to know who's calling the shots and what latitude they have."

Unfortunately, that's not always easy for the public to do. Only last July did the Securities & Exchange Commission require fund companies to name portfolio managers in shareholder reports or prospectuses. And this often doesn't give a true picture. Fund companies worry that if a star manager leaves, investors will follow. Increasingly, therefore, they describe their funds as run by teams when in fact, claims Phillips, "somebody, somewhere, calls most of the shots."

LONELY INSIGHT. To be sure, there are cases where a manager's impact is limited—such as with index or money-market funds. And the amount of support the manager gets can be critical. Sheldon Jacobs, editor of *The No-Load Fund Investor*, found that the manager's importance varies inversely with the size of the fund group's staff. "Fidelity has huge internal turnover, and yet it clearly is not hurting them," he says. In equities alone, Fidelity Investments has 75 research analysts, 22 assistant analysts, and 25 traders.

Some fund groups, such as American Funds and Twentieth Century, are successfully run by committee. But it's generally thought that group decisions diminish returns. "Consensus won't create great ideas," says Ken Heebner, manager of CGM funds. "Basically, a good investment idea is pretty unusual and has to be a somewhat lonely insight. If the merit of the idea is visible to a lot of people, it quickly cuts into the pric

And while performance the first gauge of a mana er's success, individual sty and philosophies vary wide Do you want a manager w ing to take a bold contrari stand? Or a manager who f lows a formula? Take Hee ner's CGM Capital Develo ment fund a Charles Albe Guardian Park A enue. Both a growth funds wi almost $600 milli in assets. Both ha pretax 10-year r turns of rough 80%. But the styles are entire different.

Heebner aggr sively picks stoc for explosive grow over short period He eschews diver fying and holds on about 25 stocks co centrated in a fe sectors. Some 50% his portfolio is banks, for examp "because they' been out of favo He looks for dea driven by earnin potential. But calls himself an "opportun tic" manager, with an eclec style that isn't pinned to fixed system.

HEART ATTACK. By contra Guardian's Albers uses sophisticated quantitative mo el to help him decide wh and what to buy and se Guardian is widely diversifie with 270 stocks, no one which makes up more th 2.5% of the whole. Just looki at performance wouldn't be t best clue to choosing betwe these two. For instance, som one with low risk toleran

have a heart attack
ing Heebner's fund
.
unately, as mutual funds
grown in popularity, so
e amount of print and
devoted to their man-
Research reports, such
se from Morningstar and
alue Line Mutual Fund
are available at public
es, while many business
ations and television
provide regular inter-
with fund managers.
und companies have ac-
nareholder relations de-
ents that can answer
ons. You can find phone
rs in fund prospectuses
nagazine listings. In
, Louis Rukeyser, host
ll Street Week, launched
thly newsletter featur-
erviews with the names
l the numbers. In the
ssue of *Louis Rukeyser's*
l Funds ($48 a year; 800
22, ext. 3333), Brandy-
Fund manager Foster
describes how he picks
nies that can capitalize
ietal trends.

When it comes to evaluating performance, it helps to "think of the fund's track record as the resumé of a person you're about to employ to manage your money," says Michael Stolper, who has his own investment advisory firm in San Diego, and whose free brochure, *How to Select an Investment Manager*, contains tips on hiring personal and fund managers (800 426-6502). Look for at least a three-year tenure with a given fund for consistency. The longer the history, the better the results and the greater the chance that success will continue. But, Stolper warns, it's important to look at annual returns. A five-year record may be skewed by one great year. "The really gifted managers will do well three out of five years," he says.

Don't blithely choose this year's top performers. "Some of the most bizarre characters on the planet have brilliant short-term records that then sputter out," says Rukeyser. Indeed, he points out that Peter Lynch, who gave Fidelity Magellan the best overall fund record in the 1980s, never ranked more than 16th in any year. Where possible, see how managers did during such down years as 1973-74, 1987, and 1990. Look for a coherent policy: Even though Heebner has an eclectic style, his concentrated growth approach is consistent. Review quarterly and monthly returns, says Carl Gargula, a managing director at Ibbotson Associates, because year-end figures can be misleading: "They sell the losers, take some capital gains, and boost returns that way."

Ultimately, who runs your fund is as important as its performance. You wouldn't trust your kids with an unknown sitter. So why give your savings to a stranger?

Pam Black

GETTING TO KNOW YOUR FUND MANAGER

- Find a manager with at least three years on the job and compare the returns with those of similar funds
- Check annual returns to make sure a high overall ranking doesn't come from one or two good years. Look for your manager to be ahead three out of five years.
- How did the manager weather corrections, crashes, or bear markets, such as those in 1973–74 and 1987?
- Is the manager's investment philosophy coherent and based on a disciplined approach you can live with?
- Keep an eye on changes. Is a manager leaving? Are the portfolio holdings changing dramatically?

DATA: BUSINESS WEEK

elegates to the 1992
Democratic National
Convention in New
didn't realize their goody
contained a small for-
It came in the form of a
card from Nynex, with
dering of the Manhattan
e and "D92" on the face.
the time, it was worth
$1 in long-

ERIVOX
SET GOES FOR $200

ce calls. But today, col-
s are scampering for the
one of which sold re-
for $1,700. "They just
peared," says Luis Vig-
New York dealer.
e Nynex card is one of
reds of phone-debit
—many originally issued
omotional gimmicks—that

Collecting

PHONE CARDS THAT HAVE COLLECTORS CALLING

are now hot properties among collectors. Not surprisingly, the craze started in Europe, where phone cards have been in use since they were invented in Italy in 1976. Only in the past five years has it spread to the U. S., where there are now an estimated 5,000 fanciers.

Phone-card values are loosely based on the number that were made and what's pictured on them. For example, AT&T issued only 500 cards for the 1992 America's Cup, and they now fetch up to $1,000 apiece. Nynex distributed 20,000 cards at the Democratic convention—but most got thrown away. Even though 100,000 were made in 1993, a set of 20 Amerivox phone cards, each with a different picture of Elvis Presley, sells for $200, based on the popularity of Elvis memorabilia.

Most U. S. cards come in $1, $5, or $10 denominations. But some companies, in trying to capitalize on demand, are issuing cards with no long-distance time on them. Most collectors consider these worthless. Cards from the likes of Sprint and Nynex are the safest bets since those companies aren't likely to go under, says John Taylor, editor of collectors' magazine *Premier Telecard* ($78 a year; 805 542-9346).

CARTOONS FROM GERMAN TELEKOM

ONE OF THESE NYNEX CARDS RECENTLY FETCHED $1,700

Other reliable guides include *Credit Card Collector* ($19.99 a year; 150 Hohldale, Houston, Tex., 77022), *International Telephone Cards* ($5 a copy; 800 683-0036), and Lin Overholt, a Florida collector who offers a catalog ($5; P. O. Box 8481, Madeira Beach, Fla., 33738).

Stamps weren't originally issued to be collected, yet rare ones sell for thousands of dollars today. Similarly, phone companies weren't thinking "collectibles" when they began producing decorative phone-debit cards. But who knows what they'll be worth in a few decades?

Chris Roush

Smart Money

PROFITS: THE HEALTHIEST THING ABOUT CIGARETTES

These days, tobacco is taboo. But behind the political firestorm that's engulfing the cigarette makers, you'll find a group of stocks that nevertheless promises healthy returns. Investors who don't mind tobacco stains in their portfolio could clean up.

Wall Street had all but written off tobacco shares. By early April, even diversified heavyweights Philip Morris and RJR Nabisco were trading at multiples that valued their cigarette operations at little or nothing. Then, on Apr. 26, British conglomerate BAT Industries announced that it was buying the American Tobacco subsidiary of American Brands. The $1 billion deal, at nine times earnings, put a fresh spin on tobacco stock valuations. "That buy should have alerted investors that domestic tobacco isn't worthless," says analyst Ronald Morrow of Smith Barney Shearson. Although tobacco stocks edged up in the latter part of April, many analysts still believe there remains plenty of room for further appreciation.

DISTANT THUNDER. Still, the barrage of bad news that has beaten down the stocks isn't over. Antismoking activists predict the courts will pierce the tobacco companies' Teflon defense against product-liability cases. The upshot? Some see damage awards rivaling asbestos payouts.

In the meantime, the industry's fundamentals are surprisingly strong. Rebounding from last year's bloody price war, 1994 earnings for Philip Morris, Reynolds, and American Brands, which represent more than 80% of the domestic market, should leap 11%, Morrow estimates. Nettlesome discounts to wholesalers are disappearing, and the higher-margin premium cigarettes have regained market share.

As a result, the industry will throw off more than $3 billion in free cash flow for the year, up 75% from 1993. That's plenty of money to continue aggressive investment in the expanding global market for cigarettes. It's also enough to help support tobacco as a stand-alone business, in case Philip Morris or RJR should follow through on talk that they might spin off their food companies. Meanwhile, current investors should be happy with dividends of around 5%.

Analysts are particularly high on Philip Morris. Sanford C. Bernstein & Co.'s Gary Black is projecting 12% annual growth in earnings and dividends between now and 1998, even with an expected 75¢-a-pack hike in federal cigarette taxes. The company's strong support of Marlboro is the driving factor. A year ago, Philip Morris turned the stock market upside down with its 40¢ price cut aimed at shoring up the brand. As hoped, Marlboro managed to reverse its slide, posting a 1.1% uptick in market share for the 1993 fourth quarter. To pump up its entire stable of brands, the company has introduced a "frequent buyer" incentive program, which will provide rewards to wholesalers who are willing to stock a higher percentage of Philip Morris products at the expense of competing brands.

SMOKING OUT TOBACCO STOCKS

	SHARE PRICE 5/2/94	PRICE-TO-EARNINGS, 1994 EST.	1994 EARNINGS GROWTH*
BAT	$14¼**	12.6	8.7%
LOEWS	$89⅝	11.8	21.4%
PHILIP MORRIS	$54	10.2	14.7%
RJR NABISCO	$6½	15.5	35.5%
UST	$27	14.5	16.3%

*ESTIMATED, PER SHARE **AMERICAN DEPOSITARY RECEIPT

DATA: SMITH BARNEY SHEARSON

Marlboro's price dive was a direct hit on the earnings and volume of No. 2 Reynolds. By yearend, however, Reynolds was the only tobacco company to increase share, jumping 1.8% for the year. Analysts say that parent RJR's stock is a bargain at $6.50. In addition to the upside in tobacco, the Nabisco food business—No. 1 in cookies and crackers—is strong, turning in 10% volume growth for the last two quarters, thanks to a slew of new products and line extensions.

And if that's not enough to entice investors, RJR is selling Preferred Equity Redemption Cumulative Stock (PERCS) at $6.50. With a 9.25% dividend, PERCS offer an attractive yield: RJR doesn't pay dividends on its common stock. The PERCS convert into common stock after three years, or before then if the shares hit a call price of $9.43. Unlike a failed RJR offering a year ago, the PERCS deal rewards investors for positive returns from food and tobacco operations. Investors snubbed the previous plan to issue a separate Nabisco-only stock when RJR, squeezed by the cigarette price war, tracted a promise to pay dividend on the remaining bacco shares.

RIGHT SNUFF. The outlook smaller players is mix BAT's Louisville-based Bro & Williamson Tobacco subs iary, a distant third in t U. S. market, needed to b up or get out. Picking American Tobacco's 6. helps. As declining domes consumption squeezes the tle guys, expect more cons dation ahead. Loews Co may eventually shed its rillard unit, whose success Newport cigarette bra might make an attracti U. S. target for a foreign bacco company. Invest should steer clear of high leveraged Liggett Grou Slumping share and reliar on slimmer-margin gene cigarettes make Liggett t most vulnerable player.

But small doesn't alwa mean weak. UST Inc., mak of moist snuff, is a tiny po erhouse, with an 85% sha of its market. Smith Barne Morrow predicts that futu earnings will grow by 15% 18%. As smokers look alternatives to lighting U. S. Tobacco is expected benefit. *Maria Mall*

Worth Noting

■ **PATENT HELP.** Do y dream of making big bucks your garage inventions? H ing a lawyer to navigate p ent channels can cost $5,0 to $10,000. Now, there's P ent It Yourself, a $230 so ware package from self-he legal publisher Nolo Pre (800 992-6656), which inclu all the required forms and structions, plus advice on searching patent potential.

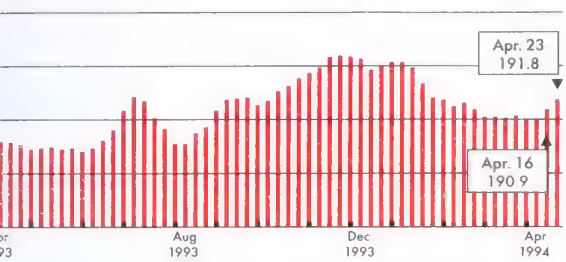
■ **UNIT WHAT?** Is your b ker trying to get you to b something called a unit inve ment trust? Find out what is, how it differs from a mu al fund, and what advantag it offers in *On Track W Unit Investment Trusts*, fr from the Investment Com ny Institute, 1401 H St. N Washington, D. C. 20005-21

usiness Week Index

ODUCTION

e from last week: 0.5%
e from last year: 2.3%

1967=100 (four-week moving average)

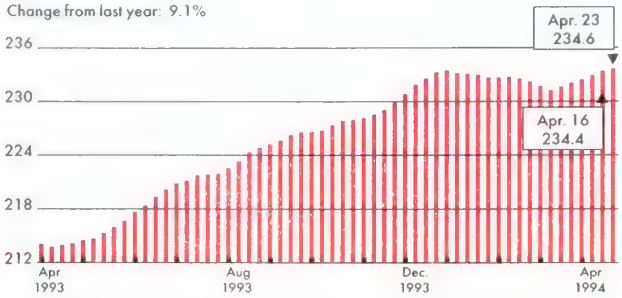


oduction index was up strongly during the week ended Apr. 23, as rail-freight picked up, probably because the Teamsters' strike shifted truck cargo to rails. ition, seasonally adjusted output of electric power, crude-oil refining, coal, and oard increased. Auto, steel, truck, paper, and lumber production declined for ek. Before calculation of the four-week moving average, the index rose to from 193.4.

BW production index copyright 1994 by McGraw-Hill Inc

LEADING

Change from last week: 0.1%
Change from last year: 9.1%



The leading index was little changed in the week ended Apr. 23, but the latest data suggest that the index will begin to weaken. That's because lower stock prices, higher bond yields, and sharply lower growth in real estate loans and M2 offset a rise in materials prices. Data for business failures were unavailable. With so many indicators down, the index, before calculation of the four-week moving average, dropped to 233.9, from 236.2 in the previous week.

Leading index copyright 1994 by Center for International Business Cycle Research

ODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
4/30) thous. of net tons	1,960	1,849#	7.2
(4/30) units	143,467	143,368r#	3.4
(4/30) units	117,982	124,426r#	14.9
C POWER (4/30) millions of kilowatt-hours	54,593	53,092#	5.5
OIL REFINING (4/30) thous. of bbl./day	14,065	13,974#	3.1
/23) thous. of net tons	21,447#	21,242	14.5
OARD (4/23) thous. of tons	847.9#	824.4r	8.9
4/23) thous. of tons	808.0#	829.0r	−1.9
R (4/23) millions of ft.	446.0#	456 6	−3.8
EIGHT (4/23) billions of ton-miles	22.9#	22.7	4.6

s: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, n Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association can Railroads

EIGN EXCHANGE

	Latest week	Week ago	Year ago
SE YEN (5/4)	102	103	110
N MARK (5/4)	1.66	1.67	1.58
POUND (5/4)	1.50	1.50	1.58
FRANC (5/4)	5.69	5.75	5.31
AN DOLLAR (5/4)	1.39	1.38	1.27
FRANC (5/4)	1.41	1.43	1.42
N PESO (5/4)[3]	3.288	3.295	3.148

s: Major New York banks. Currencies expressed in units per U.S. dollar, except for British xpressed in dollars

CES

	Latest week	Week ago	% Change year ago
5/4) $/troy oz.	375.150	374.250	5.9
CRAP (5/3) #1 heavy, $/ton	135.00	137.50	26.8
TUFFS (5/3) index, 1967=100	216.9	217.0	5.8
R (4/30) ¢/lb.	93.9	91.6	5.2
NUM (4/30) ¢/lb.	61.3	61.3	19.0
(4/30) #2 hard, $/bu.	3.72	3.59	10.4
(4/30) strict low middling 1-1/16 in., ¢/lb.	78.40	77.68	39.9

s: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* ansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (4/29) S&P 500	451.15	444.66	3.1
CORPORATE BOND YIELD, Aaa (4/29)	7.81%	7.93%	5.5
INDUSTRIAL MATERIALS PRICES (4/29)	98.7	98.7	1.5
BUSINESS FAILURES (4/22)	NA	NA	NA
REAL ESTATE LOANS (4/20) billions	$421.9	$424.5r	4.0
MONEY SUPPLY, M2 (4/18) billions	$3,556.3	$3,562.3r	3.6
INITIAL CLAIMS, UNEMPLOYMENT (4/16) thous.	364	350	2.2

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
PERSONAL INCOME (Mar.) annual rate, billions	$5,633.1	$5,600.0r	6.5
CONSTR. SPENDING (Mar.) annual rate, billions	$495.4	$491.7	9.0
12 LEADING INDICATORS COMPOSITE (Mar.) index	101.2	100.5r	2.8
NEW HOME SALES (Mar.) annual rate. thous.	739	665r	23.2

Sources: Commerce Dept., Census Bureau

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (4/18)	$1,137.9	$1,143.7r	9.5
BANKS' BUSINESS LOANS (4/20)	290.9	286.9	5.2
FREE RESERVES (4/27)	1,251	773r	−2.9
NONFINANCIAL COMMERCIAL PAPER (4/20)	157.0	151.4	−0.3

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (5/3)	3 81%	3.42%	2.98%
PRIME (5/4)	6.75	6.75	6.00
COMMERCIAL PAPER 3-MONTH (5/3)	4.28	4.14	3.10
CERTIFICATES OF DEPOSIT 3-MONTH (5/4)	4.32	4.09	3.06
EURODOLLAR 3-MONTH (4/29)	4.14	4.09	3.06

Sources: Federal Reserve, First Boston

ata in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
ern Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

YOU'VE JUST MISSED THE FIRST SIGN OF BREAST CANCER IF YOU DIDN'T SEE THAT SMALL DOT IN THE UPPER LEFT HAND CORNER.
Because it can start that small inside your breast. That's why a yearly mammogram is a must, especially if you're over 50. Doctors agree that as you get older, the risk of breast cancer is higher. But with early detection, you increase your chance of successful treatment. Even though you may have missed the first sign of breast cancer, a mammogram won't. For information, please call the American Cancer Society at **1-800-ACS-2345**.

A MAMMOGRAM. EARLY DETECTION IS THE BEST PROTECTION.

A Public Service of This Publication
MASSACHUSETTS DIVISION AMERICAN CANCER SOCIETY

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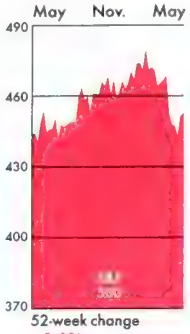
vestment Figures of the Week

NTARY

eat the dollar" week all he world. Even sharply terest rates in the U.S. t stop the drubbing of the hich fell against the yen mark. The currency woes dowed good news in earn- takeovers. In the U.S. eq- kets, big- and mid-cap ished the week little . Yields of three-month bills climbed over 4%, re- oncerns over the econo- ngth.

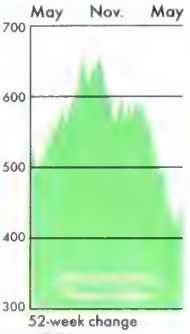
STOCKS



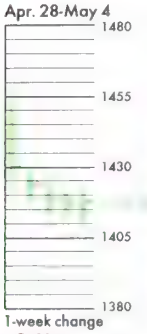
52-week change
+1.6%

1-week change
0.0%

BONDS

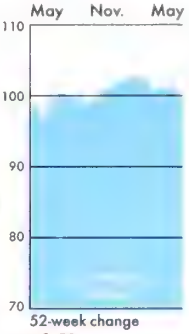


52-week change
−7.5%



1-week change
−2.4%

THE DOLLAR



52-week change
+2.5%

1-week change
−0.2%

RKET ANALYSIS

OCKS	Latest	% change Week	52-week
NES INDUSTRIALS	3697.8	0.0	7.2
COMPANIES (S&P MidCap Index)	173.4	0.7	5.7
OMPANIES (Russell 2000)	254.5	1.4	11.7
PANIES (Russell 3000)	261.7	0.3	2.8

N STOCKS	Latest	% change (local currency) Week	52-week
(FINANCIAL TIMES 100)	3070.5	−2.5	9.8
NIKKEI INDEX)	19,570.2	−0.8	−6.4
(TSE COMPOSITE)	4269.2	−0.4	12.7

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.13%	3.98%	2.95%
30-YEAR TREASURY BOND YIELD	7.34%	7.11%	6.78%
S&P 500 DIVIDEND YIELD	2.80%	2.78%	2.81%
S&P 500 PRICE/EARNINGS RATIO	19.9	20.1	22.6

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	463.7	464.4	Negative
Stocks above 26-week moving average	32.7%	28.9%	Neutral
Speculative sentiment: Put/call ratio	0.37	0.41	Neutral
Insider sentiment: Vickers sell/buy ratio	1.76	1.80	Positive

USTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

VEEK LEADERS	% change 4-week	52-week	Strongest stock in group	% change 4-week	52-week	Price
TION CONTROL	14.8	−11.5	BROWNING-FERRIS INDUSTRIES	16.7	12.3	29¾
RE TIME	12.1	41.6	OUTBOARD MARINE	25.0	36.0	23⅛
SPORTATION SERVICES	11.9	38.9	FEDERAL EXPRESS	17.0	60.2	77½
S	10.8	−8.2	SYNTEX	74.8	22.2	23⅜
CONTAINERS	10.4	17.8	STONE CONTAINER	20.6	86.4	15⅜
VEEK LAGGARDS	**% change 4-week**	**52-week**	**Weakest stock in group**	**% change 4-week**	**52-week**	**Price**
ONDUCTORS	−11.1	23.4	ADVANCED MICRO DEVICES	−16.5	−8.0	25⅞
MINING	−9.6	9.6	HOMESTAKE MINING	−14.0	14.0	18⅜
ALTY CHEMICALS	−5.5	−1.4	MORTON INTERNATIONAL	−10.7	16.2	87⅞
CHAINS	−4.7	−0.5	WINN-DIXIE STORES	−14.7	−15.9	46¼
AND GLASS CONTAINERS	−4.5	−7.2	CROWN CORK & SEAL	−7.4	−6.2	35⅞

TUAL FUNDS

MORNINGSTAR INC.

S

k total return	%
HT EQUIFUND ITALIAN NATL. FID. EQUITY	9.0
TY SELECT NATURAL GAS	7.8
TY SELECT ENERGY	7.6

total return	%
DER LATIN AMERICA	57.3
ER INTERNATIONAL GROWTH A	51.8
ILL LYNCH LATIN AMERICA A	47.4

LAGGARDS

Four-week total return	%
FORUM INVESTORS STOCK	−18.3
MONITREND GOLD	−15.0
BENHAM GOLD EQUITIES INDEX	−11.6

52-week total return	%
MONITREND GOLD	−29.2
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−23.4
FORUM INVESTORS STOCK	−22.8

ATIVE PORTFOLIOS

DRI/McGRAW-HILL

mounts
nt the present
f $10,000
d one year ago
portfolio
ges indicate
total returns

Foreign stocks	Gold	U.S. stocks	Treasury bonds	Money market fund
$12,565	$10,589	$10,487	$10,216	$10,203
+0.88%	+0.21%	+0.07%	−2.16%	+0.04%

n this page are as of market close Wednesday, May 4, 1994, unless otherwise indicated. oups include S&P 500 companies only; performance and share prices are as of market close May 3. Mutual fund returns are as of Apr. 29. Relative portfolios are valued as of May 3. A more detailed explanation of this page is available on request.

NOTHING TO FEAR BUT FEAR OF GROWTH

Remember the "limits to growth" crowd in the 1970s? They're back. But instead of concerned liberals worrying about the planet running out of resources (boy, were they wrong!), we now have jittery bond traders worrying about the economy running out of capacity. Like Chicken Little warning that the sky is falling, these worrywarts are scared silly by growth and run around squawking, "Inflation! Inflation! Inflation!"

So, first-quarter gross domestic product comes in at a modest 2.6%, and what does the bond market do? It tanks, sending yields soaring. The index of employment costs are reported up a mere 3.2% for the first quarter, the smallest increase since 1979, and what happens? The bond market tanks again. The only thing that appears to make these bond vigilantes happy is high unemployment. At current yields, it almost seems as though they are building in an "unemployment rate premium" of 20% into 30-year bonds.

Trouble is, the fear of growth built into the bond market is dangerous. It threatens to stifle the great productivity surge, which promises to transform the U. S. economy, before it really gets off the ground (page 62).

Few of the bond traders have ever heard of, much less read, Joseph A. Schumpeter (1883-1950), the brilliant economist who argued that new technologies, markets, and forms of business organization supplant the old—and generate lots of economic growth. To Schumpeter, it is innovation that drives growth in a process that he called "creative destructio

The conventional wisdom in the bond markets is that t U. S. economy is growing too fast, threatening to reignite flation. Why? Because productivity is rising at 1% a ye This gives the U. S. a long-term noninflationary econor growth potential of 2.5% annually.

But what if technological innovation and globalization ha raised productivity growth to 2% annually? Suddenly, lor term growth potential jumps to 3.5%. Double the product ity growth rate, and those impending capacity bottlenec begin to fade. A wage-and-price spiral looks remote. A n ture economy appears more like an emerging market. At productivity growth, over $1 trillion in extra output accun lates by the year 2000, boosting jobs, shriveling the fede budget deficit, and raising per-capita income by $1,000.

Federal Reserve Chairman Alan Greenspan believes th American productivity growth is considerably above 1% a that the economy can grow faster without generating sign icant inflation. But he is cautious about acting on that bel because he knows that the financial markets demand that maintain a strict anti-inflation stance.

Until the tyranny of conventional thinking about inflati and economic growth is ended, the U. S. will be forced grow below its potential. That means jobs lost and drea unfulfilled.

A tragedy.

UNCLE SAM SHOULD BACK THIS NEW BUSINESS

The last time a government spent billions of taxpayer dollars to pick a winning new high-tech industry, Japan produced a dog—analog HDTV. The Clinton Administration is now proposing to start a *sui generis* flat-panel-display industry in America, and the temptation is to damn its efforts as well.

That would be a mistake. There are compelling reasons to back this particular initiative in industrial policy—as long as Congress refrains from turning high tech into local pork.

The Pentagon makes a good case for itself in proposing to spend nearly $600 million over the next five years to encourage U. S. companies to build flat-screen factories. The cold war may be over, but the world is still a dangerous place, and the U. S. armed forces need the most advanced equipment. That means thousands of flat screens for fighter cockpits, command-and-control centers, and, increasingly, field weapons (page 36).

The Pentagon claims that Japanese companies, which dominate the $5 billion industry, have shown no interest in doing specialized, small-batch runs of screens for the Defense Dept. So the Pentagon either has to build extremely expensive plants to make the flat panels itself or help create a commercially viable American industry. The generals figure that it's cheaper to provide financial incentives to such compan as IBM, Xerox, Motorola, and AT&T, and they're proba right.

Instead of taking the disastrous Synfuels route and bu ing its own factories, this time Defense is offering a mod amount of research and development money over many ye to companies that commit to putting up flat-screen-product facilities. Companies or consortiums that win a competit would receive research grants amounting to about 30% of cost of the factory. While the Defense Dept. will guarante small level of demand, the private companies will have to cc pete against the Japanese in global markets. Over the n decade, the flat-panel display market is expected to explo to $20 billion worldwide.

The Clinton Administration is making big efforts to spe more of the government's $70 billion R&D budget on comm cially viable technologies. It is correct in its general approac sprinkling small amounts of money over many promising p competitive technologies. The flat-screen initiative goes furt in encouraging actual manufacturing and barely skirts seri violation of international trade law. But the Pentagon has choice, and it has structured its incentives to private ind try wisely.

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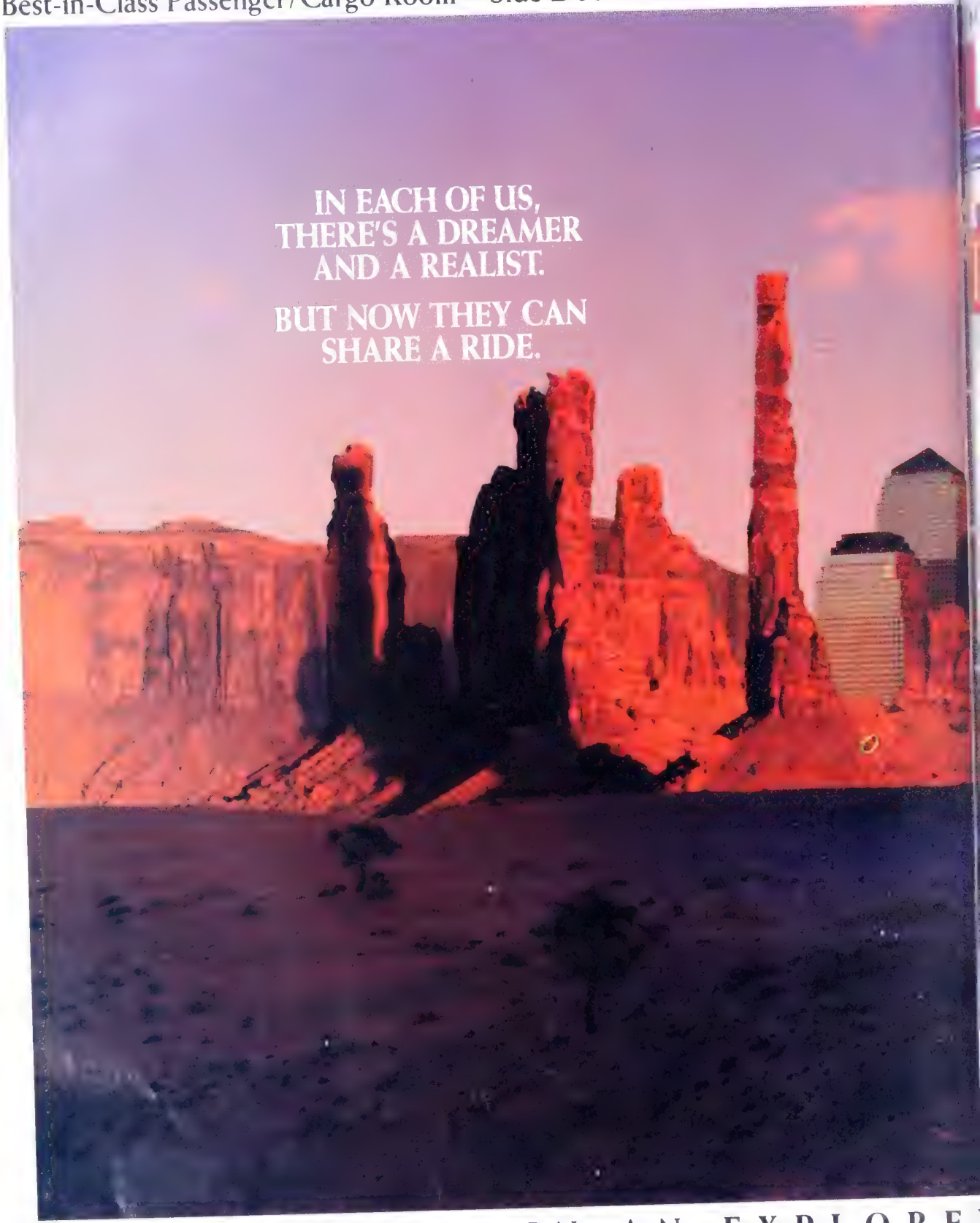

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THE INFORMATION REVOLUTION

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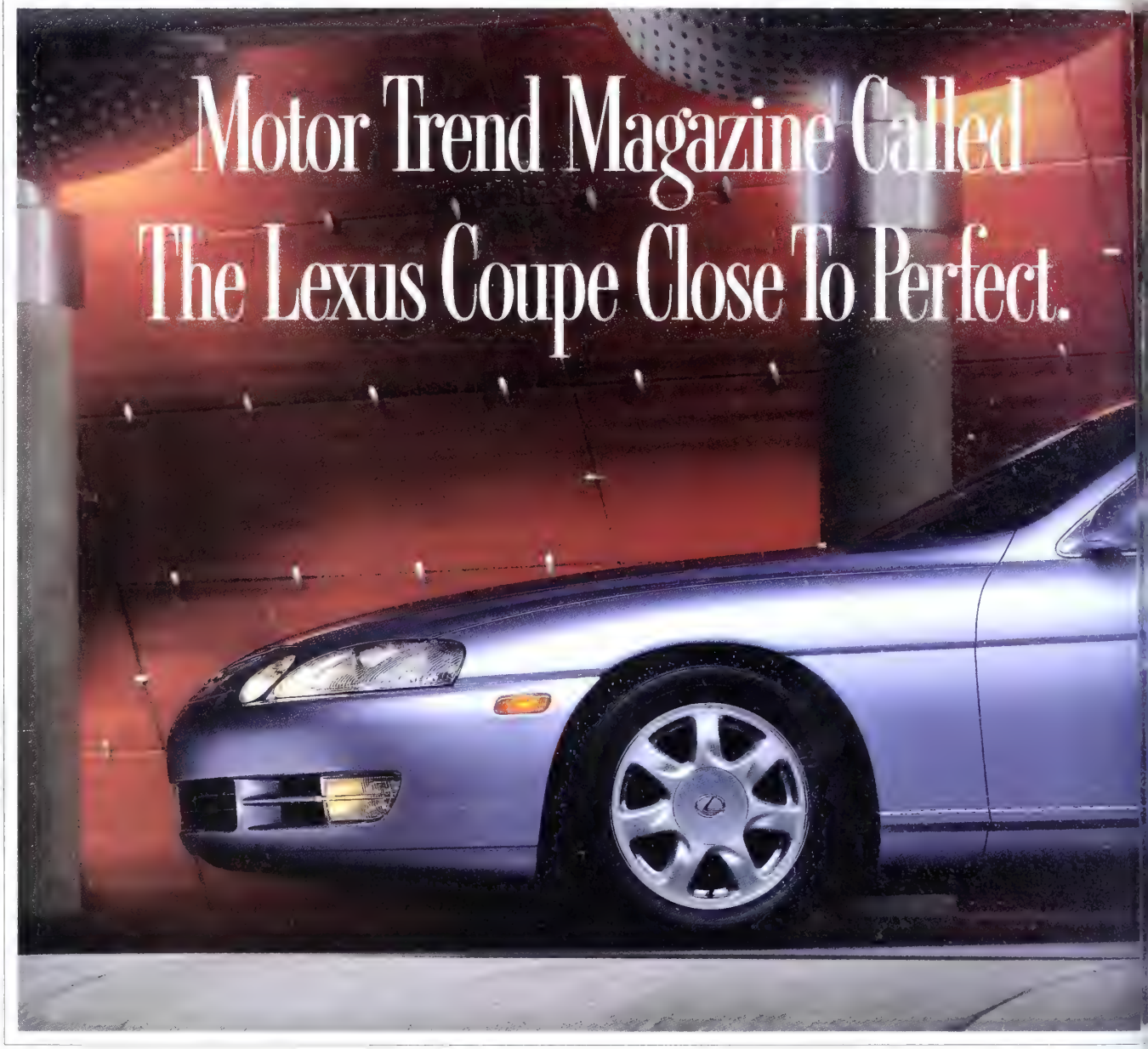

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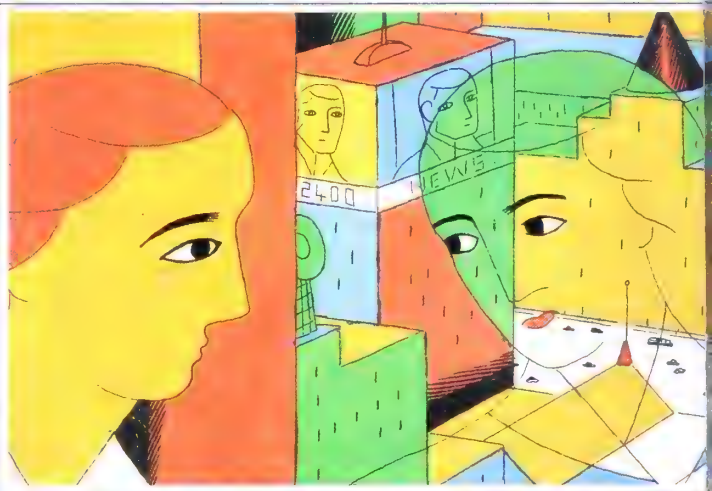

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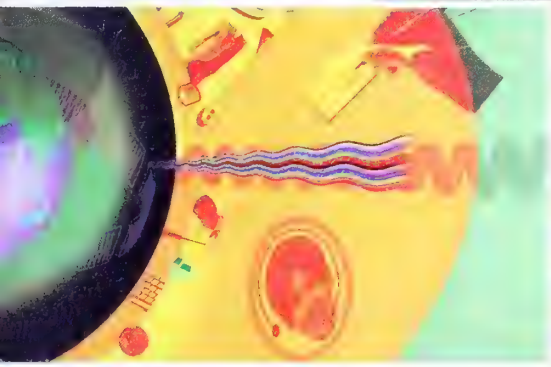

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Editor's Memo

You don't need a very long memory to recognize the transformation that computers have wrought in the workplace and in our lives. In just the 13 years since the personal computer brought new power to our desktops and workbenches, the changes have been stunning. Just look at corporate management. With information now moving from the factory floor throughout the company at blinding speed, whole layers of corporate management have been rendered obsolete. And companies have now learned that the speed of today's more competitive environment doesn't leave time for dithering over decisions, anyway. The resulting leaner style has thinned management ranks while encouraging initiative and giving people more responsibility.

Like any powerful technology, the computer leaves little room for sentiment. It has spawned an Information Revolution that promises even more profound changes than we have witnessed already. There can be little doubt that these changes, like those of the Industrial Revolution, will, on balance, provide great benefits. In preparing this bonus issue, BUSINESS WEEK's ambitious goal is to take the measure of this Information Revolution and make sense of what it means to us.

I am proud of the unique perspective BUSINESS WEEK brings to the task. Our Information Processing section pioneered coverage of computers and information issues in the 1970s. And since the advent of the PC, we have regularly provided a broad overview of developments that have converged into this subject. "The Portable Executive" in 1988 foreshadowed the world of mobile computing, cellular technology, and telecommunications. "Rethinking the Computer" in 1990 sensed a sea change and discussed the implications of the nascent movement away from mainframes to PCs that would be linked together in networks. Last year's "The Technology Payoff" spotted the imminent rejuvenation of productivity and looked at the advances being spurred by computers. It also pointed out the importance of reengineering the workplace to use computers as wisely as possible.

This special issue is the work of some 75 people, bringing to bear the expertise of our Information Processing, Science & Technology, Economics, Personal Business, and other departments. Senior Editor Geoff Lewis, who has written or edited the bulk of our groundbreaking computer stories for 10 years, drew up the outline for the issue. Assistant Managing Editor Dave Wallace oversaw the entire project.

A particularly appealing part of this issue is "Personal Technology: A User's Guide," which begins on page 141. The section's distinctive design was the work of Senior Art Director Laura Baer and Assistant Art Director Alice Cheung. Steve Wildstrom, a longtime computerphile who is the senior news editor in our Washington office, edited the guide and wrote much of it.

The Information Revolution is interactive—a two-way or hundred-way dialogue. We would love to hear your reactions to this special issue and any thoughts you have for our coverage in the future. So please—write, fax, phone, or e-mail us. In the meantime, happy reading.

Stephen B. Shepard

Editor-in-chief

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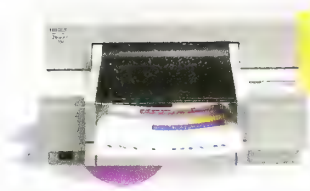

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THE INFORMATION REVOLUTION

How digital technology is changing the way we work and live.

The digital tide has already reshaped the business world. Now it's spilling out of the office to touch every aspect of our lives

BY JOHN W. VERITY

It's not something we can see, really. We certainly can't touch, taste, hear, or smell it. Yet it's always there when we look for it, available wherever we bother to direct our attention. We can glean it from the pages of a book or the morning newspaper and from the glowing phosphors of a video screen. Scientists find it stored in our genes and in the lush complexity of the rain forest. The Vatican Library has a bunch of it, and so does Madonna's latest CD. And it's always in the air where people come together, whether to work, play, or just gab.

What is it that can be so pervasive and yet so mysterious? Information, of course. Until World War II, that word referred to the personal act of acquiring knowledge. In everyday conversation, the most frequent use of the term was for what we now call directory assistance. But during the war, "information" got redefined as something quantifiable that could be collected, moved, and processed. Concerned with transmitting coded signals over noisy radio channels, engineers at Bell Laboratories came up with a measure of information based on the mathematics of probability. At the same time, designers of antiaircraft guns began laying the foundation for cybernetics, the study of how information can control machines.

Today's software lets computers simulate workings of machines that don't exist yet

Ever since then, an expanding series of phenomena—in biology, cosmology, society, business, the arts, even family relations—have been explained in terms of the exchange and processing of "information." And by now, the word is a sloppy, pseudoscientific catch-all—a slippery "amoeba word," German linguist Uwe Pörksen calls it, with nearly two dozen connotations.

However you define it, 50 years later, the capture, manipulation, transmission, and consumption of information in digital form has become a critical function in our economy—and soon, perhaps, in our civilization. For years, the spectacular proliferation of digital computing and networking has been rewriting the rules in business, and it will continue to do so. Now, as the power and reach of these technologies skyrocket, the Information Revolution promises to touch—and in some cases radically transform—every aspect of life: our work and leisure, all manner of scientific techniques, and virtually every method for recording and transmitting knowledge, including books, newspapers, magazines, movies, television, phone calls, musical recordings, and architectural drawings.

The rivers of electronic 1s and 0s that computers create, move, process, store, retrieve, shape, and reshape, all with such ease, have become a universal language for machines—the basic "material" of the postindustrial era. Churning through innumerable circuits, crisscrossing the endless reaches of cyberspace, digital information is what companies, industries, even economies must master if they are to thrive.

In short, the Information Revolution is reaching critical mass. At its core is the accelerating shift from material information media—including paper, photographic film, videotape, and modeling clay—to computer-based simulations of those media. By no means are paper or books or libraries going to disappear completely. But their traditional presence and significance in our culture, and the degree to which they've informed our concepts of self, identity, and consciousness, seem poised to fade as seemingly cheaper, less polluting, more flexible, and more attention-grabbing digital media come to the fore.

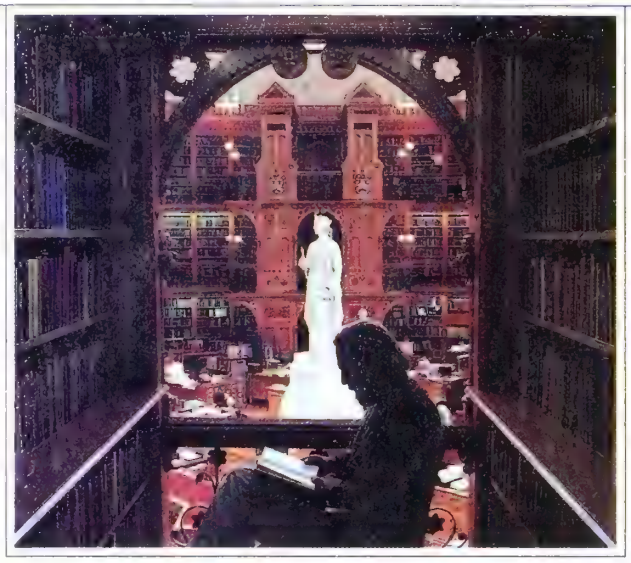
There's rich symbolism in the contrast between the traditional library and the electronic "disk farms" where digital information is stored. A classic library, such as the Parliament Library in Ottawa, is literally a shrine to knowledge—which has been fixed on paper and bound into books. The whirring disks of the Information Age may be sealed in sterile bunkers, but the information is unfettered, instantly available to thousands of "users." And the digital store of knowledge—the latest stock prices or a freshly scanned and digitized version of a 12th century manuscript—is being continuously amended and updated.

This mass digital substitution is what Glover Ferguson, director of research at Andersen Consulting, calls "virtualization." It's a re-creation, like the virtual image you see in a mirror, of the "real world." And while the idea may be frightening—in a house of mirrors, how do we know what is "real" and what is not?—the many changes that virtualization makes possible can be exhilarating to contemplate.

Take something as innocuous as letter-writing. With cheap long-distance telephone service, people had fallen out of the habit. But thanks to the new virtual post office that vast computer networks create, tens of millions of people have rediscovered the lost art. And because the virtual post is so much faster and more powerful, they're doing things with e-mail they never could on paper, such as corresponding instantaneously with dozens of like-minded individuals across the globe to share their thoughts on Buddhism or the works of Thomas Pynchon. These "virtual communities" are springing up everywhere, bringing together people who otherwise would never meet.

That is the essence of virtualization: Rather than simply re-creating in digital form the physical thing we know as a letter, e-mail reinvents and vastly enhances letter-writing. Unbound by barriers of time and space and endowed with new powers, the electronic letter does something new altogether. The same sort of thing can happen when business, the arts, or government are reborn in digital form (page 122).

What gives computers such awesome potential to reshape the world? For starters, all technologies that "process informa-



OTTAWA'S PARLIAMENT LIBRARY (ABOVE) IS LITERALLY A SHRINE TO KNOWLEDGE. AETNA'S "DISK FARM" IS STERILE BY COMPARISON BUT MAKES INFORMATION AVAILABLE TO THOUSANDS AT ONCE

tion" (although they were never described in those terms in the predigital era) affect deeply the societies that use them. Johannes Gutenberg's printing press eventually helped reformers to erode the Catholic Church's political power: Books spread knowledge in ways the Vatican could not control.

Later, the Industrial Revolution depended on new technologies to coordinate the flow of energy and raw materials into factories, to manage a radically segmented labor force, and to guide the large-scale distribution of finished goods. Industrialists also sought ways of stimulating demand for their mass-produced products. The result: the telegraph, telephone, punched-card tabulator, tabloid newspaper, advertising, financial accounting methods, market research, and broadcasting.

But the world has never seen anything like the computer. It is by far the most powerful tool ever for recording and communicating representations of human knowledge in coded, or symbolic, form. In short, it's a universal manipulator of symbols. And, by virtue of its programmability, the computer is infinitely malleable—the first machine that, fed the right symbolic information, can simulate the workings of any other machine, including imaginary ones.

Today, software can turn a computer into a television, record player, or paintbox and canvas—or make it transmit telephone conversations, edit and replay video images and music, snap family photos, synthesize human speech, imitate a 16th century harpsichord, organize databases and libraries full of books, and coordinate activities across space and time. Using real or imagined data, the computer can simulate complex physical and logical processes or entire "chunks" of reality and make them "real" through a combination of animated drawings, sounds, and even tactile feedback.

These virtual realities, or "mirror worlds," as David Gelernter, a computer scientist at Yale University, calls them in his book of the same name, offer a powerful new way of viewing and understanding the world. They are already helping architects take revealing walk-through tours of buildings that don't exist yet. Carmakers can test-drive models that won't be built for years—or may never be, if the simulation finds them wanting. And in the future, mirror worlds may let students attend virtual universities or enable citizens to monitor the minute-by-minute workings of governments.

The virtualization of business is well under way. And before it's over, says Ferguson of Andersen Consulting, companies contributing 76% of all U. S. corporate revenues stand to see their businesses deeply affected—if not replaced entirely—by digital technologies. This can mean something as simple as switching to electronic invoices or as radical as completely changing the nature of the business—a very real prospect for entertainment and media companies. Today, virtualization is eliminating slack at every level of business, from the internal routines of single companies to the organization of industries and marketplaces. It's removing intermediaries, speeding transactions, rebalancing power relationships, and slashing costly fat—all of which is intensifying competition in the U. S. and around the world (page 20).

In Silicon Valley, a group of electronics companies is sponsoring a model for a virtual business environment called CommerceNet. The idea is to exchange reams of technical product information, consulting services, software products, and order forms electronically instead of on paper. By moving intracompany communications and transactions onto the network, planners expect substantial cost savings. The goal is to make Silicon Valley—and eventually the U. S. electronics industry—more competitive.

Such networks will make possible another development of the Information Revolution: the virtual corporation. Rather than retaining full-time staffs for some functions, corporations will use the network to shop for talent—subcontractors and ad hoc teams or individuals to work on a specific project or act as a virtual department within the corporation, say, for graphic design.

The virtual corporation is still far in the future for most businesses. But in the meantime, companies of all kinds are gaining efficiencies and improving product quality through the clever use of information technology. From Ryder System Inc., where special diagnostic computers are slashing repair costs, to retailers, such as Sears, Roebuck & Co., which keep better track of sales trends, companies are reengineering themselves with information technology (page 98).

Next in line for virtualization, it appears, are huge swaths of the communications, media, and entertainment worlds. High-speed networks and "digitalization" are remaking the world's telephone industry—both wired and wireless. Meanwhile, publishers, broadcasters, and movie studios are scrambling to figure out ways that they can prosper on the elusive

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Information Superhighway.

Driving the changes in these businesses is the computer's ability to reduce all conventional information forms into one big digital stew. Today, a stream of digital bits can be engineered to represent a complex expression of text, calculations, sound, moving pictures, real-time simulations, a menu of interactive programs, and even connections to "live" data off a network—all of it cross-indexed and able to respond instantly to the reader-viewer's desires. The prospect of brewing this exotic multimedia mix for mass consumption is fueling dozens of new business ventures that are bringing together computer, communications, media, and entertainment companies in search of "new media" and "digital convergence." Says Alan G. Merten, dean of Cornell University's Johnson Graduate School of Management: "It's not emerging, but merging technologies" that are important to understand.

The traditional, self-contained computer is merging into the collective identity of the network

On one level, the digital future is easy to forecast—at least in the near term. Hardware technology is advancing predictably, making it possible to describe the approximate processing power, storage capacity, or graphics capabilities of the PC of 2001. For the next decade at least, what chipmakers call Moore's Law (posited by Intel Corp. Chairman Gordon Moore) still holds: At any given price level, microchips will double in performance every 18 months (page 52).

Equally predictable is the explosion in communications capacity and networking technologies. Fiber optics, schemes for jamming more data down old copper lines, wireless transmission, satellites, and Infobahns will put amazing amounts of low-cost, high-speed communications capacity at our disposal. And new techniques are emerging for managing that flood of information. One that's available now, called World Wide Web, allows people to browse for information scattered all over a network, without ever knowing which computer they're tapping.

As the networks spread, the traditional, self-contained computer is merging into the collective identity of the network. Maybe it's CompuServe or America Online, your office PC network, or the vast Internet, but the effect is the same: It's getting more difficult each day to draw the boundary between this computer and that.

At the same time, what we've come to know as "the computer" itself is likely to disappear—physically and figuratively. Miniaturized components are cramming all the functions of today's PCs into ever-smaller packages: Apple Computer Inc.'s Newton and similar handheld gizmos are only a first step. Researchers at Xerox Corp. and Olivetti are driving toward a concept called "ubiquitous computing," in which computing resources are embedded throughout the human environment—in appliances, digital whiteboards, and walls, or the surface of your desk, which might turn your scrawl into perfectly formatted, spell-checked text.

Predicting how all this information technology will affect culture and social relations is not so simple. Gutenberg, after all, had no idea what his printing press would lead to. But we can see glimmers. For instance, schools are beginning to use computers in new ways—not just as electronic drill-and-practice machines. By connecting to vast networks, classroom computers are expanding students' horizons, allowing children in different states and nations to collaborate on science projects, for example. In the process, students may gain a better understanding of both the subject and one another.

Meanwhile, millions of people around the world are joining computer networks. The Internet, a global and essentially public network of networks, is fast becoming an information exchange and learning medium for professionals of all stripes—and, increasingly, for ordinary citizens, too. It's essentially one giant experiment in digital networking, where all sorts of new approaches to building digital infrastructure and creating commercialized services are being tested and perfected.

Ultimately, it's society, not technology alone, that will determine how the Information Revolution will play out. "All tools are socially constructed," says David Shields, a sociology professor at Georgia Institute of Technology. They're shaped, that is, by an array of forces that includes tradition, politics, economic interests, history, and competing technologies—the combined effects of which are exceedingly difficult to predict. Just think: The mass-produced automobile was a godsend for people isolated on farms. But who could foresee how its overuse would eventually choke cities with traffic and smog and create a debilitating dependence on oil?

Predicting the computer's effects seems equally perilous. As the most symbolic of all tools, it can be just about anything we program it to be—a telephone switch, calculator, missile guidance system, or fantasy environment. That malleability is what stirs the imagination so strongly. But we'd do well to keep in mind what computer scientist Joseph Weizenbaum wrote 18 years ago in his book *Computer Power and Human Reason*: We must learn the limitations of our tools as well as their power. Even in its most advanced state, the computer is not, and never can be, a panacea for human problems or a substitute for our own, uniquely human judgment. □

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THE INFORMATIO

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CONOMY

In the '90s and beyond, the engine of growth is digital

THE DIGITAL JUGGERNAUT

Never mind services—the information economy is driving growth in the '90s. For most Americans, that translates into jobs and prosperity

BY MICHAEL J. MANDEL

In every era, there is a group of industries that sets the pace for the rest of the economy. A century ago, the railroads were America's growth engine. In the postwar decades, manufacturing was the key to U. S. prosperity. During the 1980s, the driving forces of expansion were booming service industries such as health care, legal services, and retailing: All told, during that decade, the service sector accounted for practically all of the growth in jobs and corporate profits. Economists began to speak of the U. S. shift from a manufacturing to a service economy.

Yet for all the vitality of services, many skeptics did not see how they could make the economy thrive over the long term. In fact, the shift seemed like a giant step backward, since service jobs paid lower wages on average than manufacturing and had significantly slower productivity growth. Moreover, services such as medical care and retailing were much harder to export than manufactured goods. The worry was that if the U. S. lost its manufacturing industries, it would have a difficult time selling enough services abroad to pay for its imports of cars, consumer electronics, and other goods.

Fear not: Like adolescence, the service economy has turned out to be a temporary stage. Far more than most people realize, economic growth is now being driven not by services, but by the computer, software, and telecommunications industries. Indeed, according to the Commerce Dept., business and consumer spending on high-tech equipment accounts for some 38% of economic growth since 1990.

What's more, government statistics underplay the evolution of the information economy. Industries that depend on processing and moving information—such as financial services and entertainment—are prospering. And companies in every industry are using information technology to reengineer themselves and become more competitive. In short, "the role of information is transforming the nature of economy," says Kenneth J. Arrow, a Nobel prizewinning economist at Stanford University.

In this regard, at least, the U. S. is leading the way for the rest of the world. Europe is deregulating its telecommunications industry in order to create jobs and stimulate development. Japan is mounting an intense effort to narrow the considerable edge the U. S. has built over the decade in personal-computer and network use. Even developing countries such as China, Hungary, and Thailand are investing heavily in state-of-the-art communications systems in an effort to leapfrog their way to prosperity.

America remains way ahead, however. And it's the place where the conse-

REPAVING THE ROAD
NEW FIBER-OPTIC CABLES ARE GIVING TELECOM CAPACITY A BIG BOOST

quences of the new economy are first showing up. To a large degree, the news is turning out to be good. For one thing, unlike most services, information products such as software and entertainment can be easily exported. And whereas productivity in the service sector grew slowly, investment in information technology is boosting productivity across the economy.

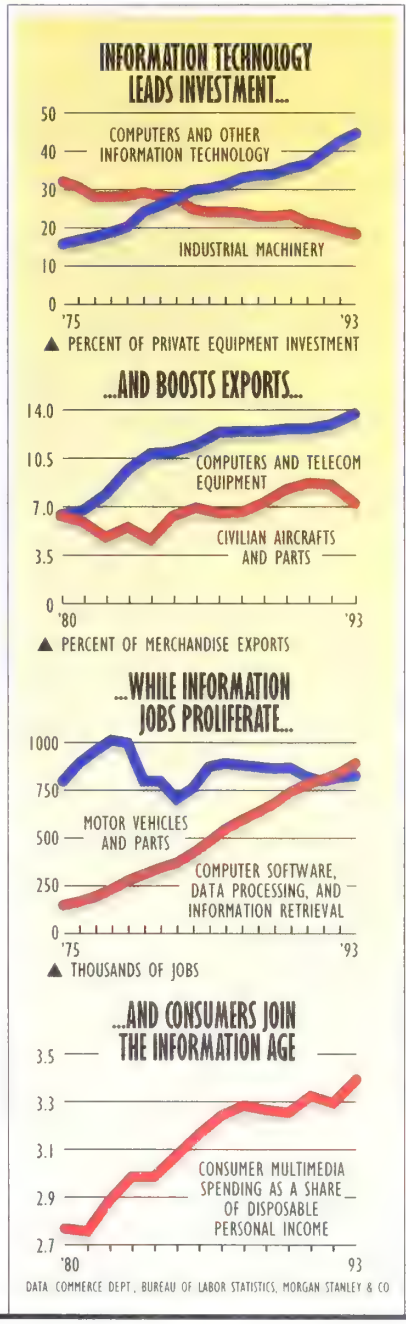
Beyond that, the effect on work is less harmful than once feared. Far from becoming low-paid burger-flippers, the quintessential job of the service sector, many Americans are turning into computer jocks. Economic studies show that their wages are on the rise as a result. For example, earnings for male computer programmers have risen by 12% since 1990, compared with 6% for all male workers. For female computer programmers, the pay gains have been even bigger: a 21% rise since 1990, vs. 13% for all female workers.

The drawback is that along with the winners, there will temporarily be lots of losers. Higher productivity has led to big layoffs at many companies, especially in the telecommunications industry (table, page 26). Elsewhere, meanwhile, advancing technology is favoring skilled workers over unskilled, increasing the inequality in wages.

For better or for worse, this transformation is occurring at an astonishing rate. Look at business investment. Measured in inflation-adjusted dollars, computers and other information technology now make up nearly half of all business spending on equipment—and that doesn't include the billions that companies spend on software and programmers each year. Meanwhile, business spending on industrial machinery, which traditionally has been the guts of manufacturing, has fallen as a share of equipment investment from 32% in 1975 to only 18% in 1993 (chart).

At the same time, information technology and services are helping to drive the continuing export boom. The aircraft industry is often held up as the shining star among U. S. exporters. Yet America's overseas sales of information-technology equipment in 1993 were $62 billion, far more than the $33 billion in overseas aircraft sales. The U. S. is also the world's largest exporter of software, a fact that doesn't show up in the government's numbers. In 1993, major U. S. software companies sold $2.5 billion worth of personal computer programs in Western Europe, Asia, and Latin America, according to the Software Publishers Assn. Microsoft Corp. alone derives some 55% of its revenues from overseas sales.

The U. S. also is running a huge $3 billion trade surplus in computer-related services, such as data processing and information databases. It's nearly as easy now to send information to Europe or Japan as to the next state or across the hall. For example, Mead Data Central Inc., the company that runs the Lexis and Nexis services, which contain legal news and general news respectively, also has databases on French and British



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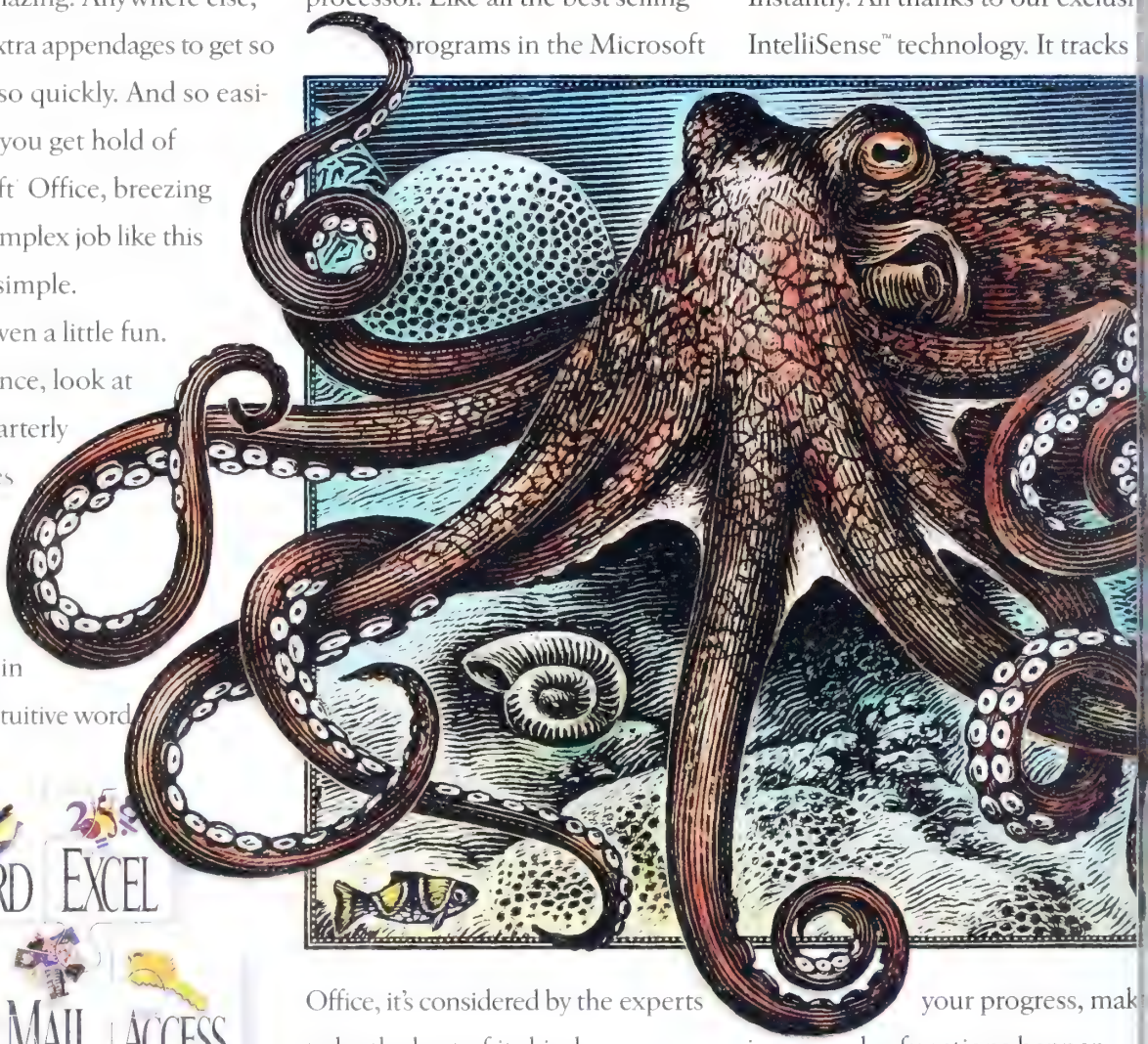

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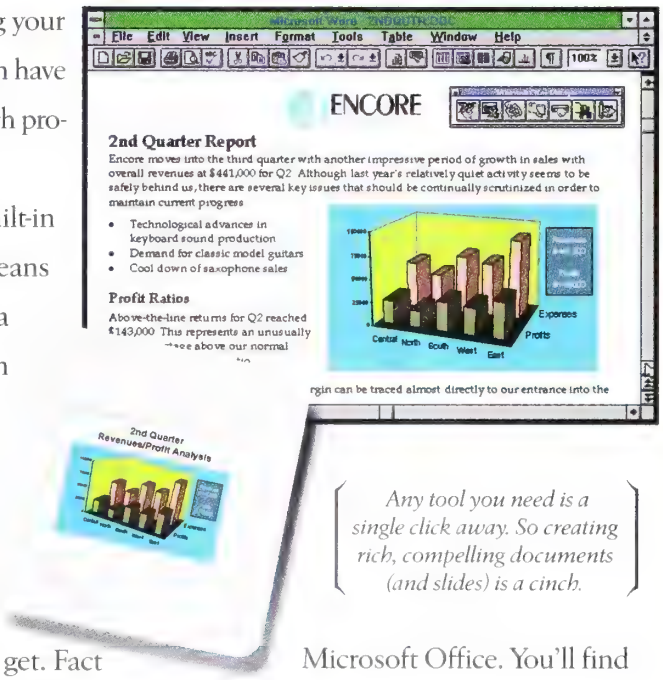

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Coming improvements in overseas communications will even make it possible to export such services as medical care. By this coming summer, doctors across sparsely populated South Dakota will be able to use a statewide telecommunications network to consult with specialists hundreds of miles away. The same expertise could be transmitted to Asia or Latin America just as easily. "The information economy can breed a healthy economy because a lot of its services are exportable," says George Bennett, chairman of Symmetrix, a technology consulting firm.

Two other positive byproducts of the Information Age are greater efficiency and lower prices. During much of the 1980s, economists worried that they could not find any impact of computers on productivity. But more recent research shows that investments in computers are worthwhile. Economists Erik Brynjolfsson and Lorin Hitt of the Massachusetts Institute of Technology surveyed 400 large companies to gauge the effect of technology on output per employee. They found that the return on investment in information systems exceeded 50%. "And most of these benefits are being passed on to consumers in the form of lower prices," says Brynjolfsson.

In fact, the productivity surge of the last two years—when nonfarm output per worker rose by 4.9%, its biggest two-year jump since 1976—may reflect the efforts of U. S. companies to finally take full advantage of the huge sums they've spent purchasing information technology. "If I put technology in and nothing changes, and then later a business gets in a crunch and discovers that it can cut out all the middle management, what made it possible?" asks Raymond Perry, chief information officer at Avon Products Inc. "Well, probably the technology did. It's just that we weren't ready to take the people out until a later point in time."

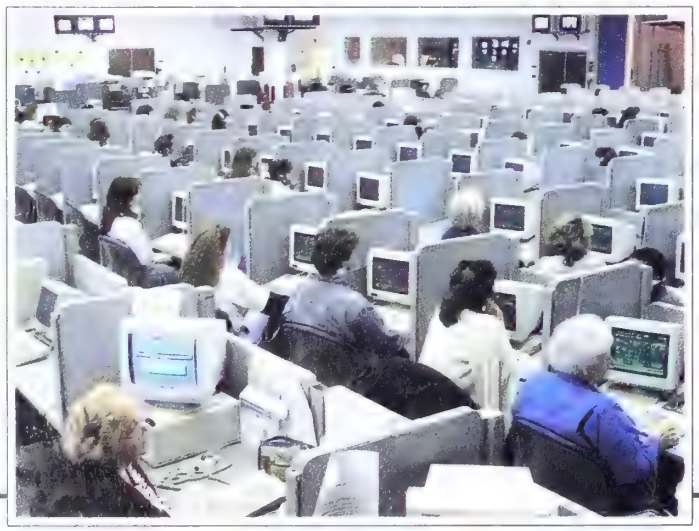
Even the recent productivity numbers probably far understate the critical role of information technology and services in driving growth. To put it simply: Government statistics track goods and jobs, not flows of information. That means the U. S. has a large and vibrant "ghost economy" that traditional economic indicators don't measure. Take the communications sector, which includes the telephone, broadcasting, and cable industries. According to government figures, communications is only 3.1% of the economy, up from 2.8% in 1984, at the time of the AT&T divestiture. Over the same period, minutes of telephone use—a key number tracked by the Federal Communications Commission—has grown only slightly faster than the overall economy.

CASUALTIES OF THE INFORMATION ECONOMY

Computer and telecommunications companies that have announced job cuts within the last two years:

	WORKFORCE	
	PLANNED CUTS	PERCENT
IBM	35,000	14%
AT&T	26,000	9%
GTE	20,000	15%
NYNEX	17,000	22%
AMERITECH	11,000	15%
PACIFIC TELESIS	10,000	19%
BELLSOUTH	10,000	12%
U S WEST	9,000	14%
APPLE	2,500	16%
AST RESEARCH	1,000	16%
COMPAQ	1,000	10%
TOTAL	142,500	

DATA: BUSINESS WEEK



Yet a closer look shows that the official statistics ignore many of the changes of the past decade. For one, a much greater percentage of the calls over the phone network are faxes and computer data going back and forth, rather than people talking. As much as 10% to 20% of the traffic across the AT&T long-distance network may be data, estimates Frank Ianna, the company's general manager for network services. That's up from 7% to 10% a few years ago. And because of time and language differences, about half of international calls are data, not voice.

These fax and computer messages pack a lot more data into a minute than they used to. Over the past few years, for example, the speed of a typical modem—which is used to transfer information between computers over phone lines—has quadrupled. That means the amount of information being pumped through the system has gone through the roof. The point is this: If the output of the communications sector is measured in terms of data transferred instead of the number of minutes it's in use, it would show far more dramatic growth than the published numbers indicate.

Prices in the communications sector have also likely fallen much more sharply than the government numbers show. According to the Bureau of Labor Statistics, the producer price index for interstate telephone service has risen by 2.4% over the past five years. Yet this figure doesn't take into account the discount calling plans that most long-distance companies now offer. Nor does it adequately track the cost and use of leased lines. The BLS hopes to remedy some of these problems with a new index for telephone prices, perhaps by January.

The information economy also has a much larger productive capacity than the current government statistics indicate. For the moment, the main measure of how close the economy is

TELE-SELLATHON
HOME SHOPPING CLUB HAS ADDED THOUSANDS OF JOBS IN NINE YEARS

its maximum operating rate is the deral Reserve's industrial capacity utilion number. While this includes utiles that sell electricity and natural gas, leaves out telecommunications. That eans there is no good measure of the nount of spare capacity in the U. S. ecom network. That's an important nission, since many businesses have come increasingly dependent on reble—and widely available—commucations services.

Even the investment boom of the past w years understates the true value of e spending on information technolo-. According to Commerce Dept. figes, investment in communications uipment has barely risen since 1990. hat these numbers don't say is that the same price, companies have been le to buy vastly more sophisticated itching gear and other telecommunitions equipment, with new capabilies such as call forwarding.

Beyond those hidden by the measement problems, there are some funmental differences between the inrmation economy and its predecessors. the past, technological improvements ch as railroads, auto plants, and steel lls required vast amounts of capital.

HONK IF YOU'RE ON-LINE

AS TELECOMMUNICATIONS IMPROVE IN RURAL AREAS, URBAN TIE-UPS COULD GO THE WAY OF THE EDSEL

But because the price of information technology continues to drop so quickly, companies can spend less to get healthy improvements in productivity and quality. Indeed, in recent years, the productivity of capital—defined as the amount of output produced per dollar of plant and equipment—has gone up for the first time in the postwar era. "As the U. S. becomes an information-oriented economy," says William Sterling, an economist at Merrill Lynch & Co., "you may have less need for capital than you have in the past."

For example, phone companies are able to boost the carrying capacity of their existing fiber-optic cables by simply upgrading the electronics at either end. That means they can add to capacity without having to go through the expensive process of digging up old cables and installing new ones.

Even connecting all of the nation's homes to the Information Superhighway may cost less than expected. In California, Pacific Telesis Group and AT&T are estimating that it will cost an average of $800 to wire each of 1.5 million homes with a combined fiber-optic/coaxial cable network that can carry the most advanced services. That compares with $1,600 for the electronics and labor needed to run a fiber cable all the way to the home. "The fiber-only estimates were scaring everybody off," says Robert Clark, vice-president for marketing and sales at AT&T Network Systems. "We've been able to see another way of getting all the services."

If these lower estimates turn out to be right, it won't come as a total surprise: On a comparable basis, the price of information-technology equipment has dropped by 23% over the past five years, according to Commerce Dept. numbers. This trend, if it continues, will have important implications for interest rates. If companies need to borrow less money to finance their investment in high-tech equipment, that will keep overall rates lower than they would have been otherwise. And that will benefit homeowners, the government, and other borrowers.

Still, there's the matter of those losers from the shift to the information

JAN SONNENMAIR

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economy. At the top of the list are the workers who have lost their jobs as companies reengineer their businesses. The reduction in staff can be enormous. At USAir Inc., 650 people were once needed in the revenue accounting department. Now that much of the process has been automated, only 350 people are needed to do the work, says Senior Vice-President and CFO John W. Harper. And at many companies, the downsizing isn't over. "Where will all these people be employed?" asks Lester Thurow, an economics professor at MIT and former dean of the university's Sloan School of Management. "It's not at all obvious."

Now, rural South Dakota schools can offer Spanish via interactive TV

Ironically, some of the biggest staff reductions have come at computer and telephone companies, which are at the heart of the information economy. Competitive pressures play a role, but these cuts are being driven mainly by technological advances that let the phone companies, for example, do with fewer operators, maintenance people, and other workers. NYNEX Corp., which supplies local phone service in New England and New York, announced plans last January to pare its workforce by 22%, or 17,000 people, by the end of 1996. Overall, employment in the telephone and computer manufacturing industries has already dropped by 154,000 since 1988, with more cuts to come.

Also at sea in the information economy are unskilled workers and people who can't keep up with technology. Indeed, recent studies suggest a hefty payoff for workers who feel at home in the digital world. Princeton University economist Alan B. Krueger estimates that people who use computers at work earn 10% to 15% more than colleagues in similar occupations who do not use computers. Says Lawrence Katz, chief economist at the Labor Dept.: "There is very strong evidence that people who work with computers earn higher wages."

Still, even if some people are being left behind, the information economy is creating thousands of new businesses and jobs. For example, the Home Shopping Network—which sells jewelry and other merchandise on cable TV—has grown to employ some 5,000 people, up from 600 in 1985. At the other end of the spectrum are startups such as SandPoint Corp., a Cambridge (Mass.) maker of software that helps people track down information in databases. Over the past year, SandPoint has grown from 15 to 32 employees, and it's still expanding. Overall, the number of jobs in the software, data processing, and information retrieval industries has risen by 31% since 1988, and these industries now employ more people than the auto industry.

Besides creating jobs, the information economy may even make it a bit easier

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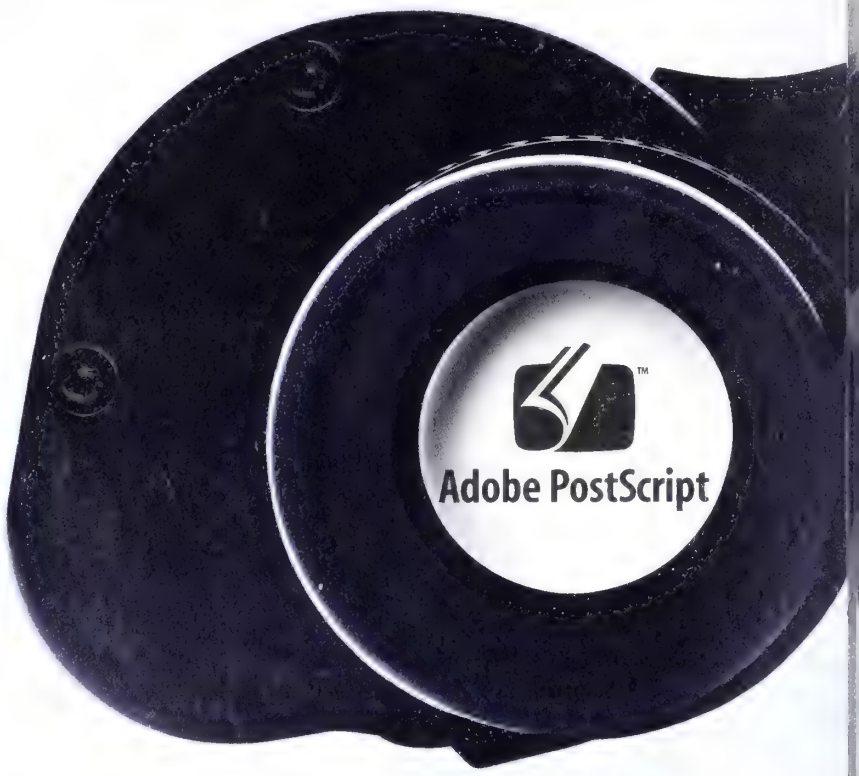

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match workers to existg jobs. The Online Caer Center, based in Indiapolis, provides job and sumé listings on the ternet. Since it went one in June, 1993, observes rector William Warren, it s become one of the ost popular databases on e system, with 13,000 to ,000 job openings listed d nearly as many remés. Ultimately, nationde listing services such this could make labor arkets more efficient and help lower employment.

The effects of the information econo are even reaching into rural areas by ifting development away from consted urban regions. With more and ore parts of the country having access high-capacity telecommunications, mpanies can now put jobs such as or-taking in remote locations without ing touch with the rest of the busiss. "What telecommunications allows you to do is put the right facilities with the right labor," notes Ken Kuhl, a consultant with Moran, Stahl & Boyer, a business relocation firm.

NEW ERA FOR EXPORTS?
UNLIKE SERVICES, AMERICAN COMPUTERS AND SOFTWARE CAN BE SOLD EASILY OVERSEAS

Technological advances will have an even more profound impact on the vitality of rural areas by bringing big-city services and amenities to small towns. For example, the telecommunications network operated by the state of South Dakota enables rural schools to offer Spanish classes via interactive TV—something they would never have been able to do on their own. The information revolution, says South Dakota Governor Walter D. Miller, "is going to change the face of South Dakota as much as rural electrification did."

That's an apt parallel. Just as the U. S. economy today would be unthinkable without electricity, so will tomorrow's economy be spurred by the free flow of information. Judging by the explosive growth of information technology so far, the juice is only starting to flow.

With Ira Sager in New York, Howard Gleckman in Washington, and bureau reports

RICHARD KAVAR MAGNUM

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FROM INTERNET TO INFOBAHN

Washington is off to a good start crafting policy to upgrade the existing network. What could go wrong now? A lot

BY JOHN CAREY

One of the great ironies of the Information Age is how often Washington inadvertently steered straight on the road to the future. The foundation of the Information Superhighway, for instance, was laid not by high-tech visionaries but by cold warriors 30 years ago. Worried that a nuclear war would, among other things, paralyze communications, they concocted a computer network capable of reaching far-flung terminals even when many connections were severed. When the Pentagon built such a network in 1969, the surprise was how quickly it was subverted to another use: electronic mail. After that, Uncle Sam ruled lightly—and let the system grow. The result is today's Internet, a mass of interconnected networks. "It's a perfect example of where government did it right," says computer networking pioneer David J. Farber of the University of Pennsylvania.

Now, Washington faces a far sterner test. The Clinton Administration and a wary alliance of computer, software, cable, and phone companies plan to create the "national information infrastructure" (NII), the network of tomorrow. Using phone lines, cable systems, and high-speed data networks, it would link CEOs and couch potatoes alike to one another and to vast amounts of services, entertainment, and information. Vice-President Al Gore, Clinton's techno-guru, has even proclaimed the Apollo project-like goal of wiring up all libraries, hospitals, and schools by decade's end—enabling, say, a kid in Detroit to browse through the Library of Congress or a rural doctor to consult faraway specialists. The crucial question: Can Uncle Sam pull this one off, too?

The pitfalls are immense. "No one knows what the NII really means," says Columbia University telecommunications expert Eli M. Noam. The uncertainties range from the nitty-gritty technological underpinnings and shape of the superhighway to the services it will provide. If past is prologue, the predominant uses will differ considerably from those being hyped today—the 500 channels of entertainment, "virtual vacations," and electronic newspapers. Who would have thought, for instance, that "the most successful application of France's Minitel [videotex] system would be dating services?" asks Eric A. Benhamou, CEO of 3Com Corp.

There will also be thorny public-policy decisions, such as ensuring that everyone has access to the networks and balancing the conflicting demands of privacy and law enforcement (table). In fact, Washington is struggling just to keep up with industry, which is forging and undoing mergers at a breathtaking pace. In five years, predicts Bell Atlantic Corp. President James G. Cullen, industry distinctions will blur and "we'll just have a series of companies using a variety of technologies."

If the feds fumble this unprecedented transition, the long-term consequences could be dire. Because a speedy Info Superhighway should boost productivity, create new markets, and be a model for the rest of the world, "the country that can get this set up first will have a significant advantage in the international marketplace," says Suzanne Tichenor, vice-president of the industry-backed Council on Competitiveness.

So far, "from my perspective, the government is doing a terrific job," says Stewart D. Personick, assistant vice-president for information networking research at Bell Communications Research Inc., an arm of the Baby Bells. The Ad-

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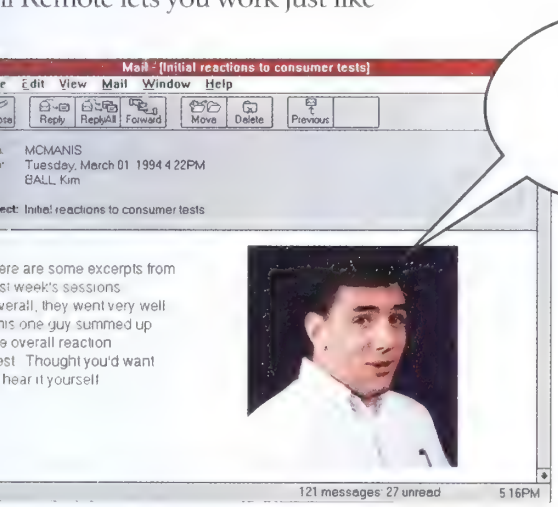

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Microsoft

ministration gets high marks for making the NII a top priority. Meanwhile, the normally tortoiselike Congress is racing like a March hare to pass sweeping legislation by summer's end. "This will be the biggest year in telecommunications in decades," predicts Representative Rick Boucher (D-Va.).

Making this progress possible is widespread agreement that the nation's 50-year-old telecommunications laws need revision—plus a fragile consensus on how to do it. The basic idea, spelled out in pending bills, is for Uncle Sam to break down many regulatory barriers that hamstring the industry. Thus, cable companies could compete in the phone business, while regional Bells might sell now-prohibited services, such as entertainment. But regulators won't disappear entirely. To ensure that digital highways don't bypass America's rural and poor byways, the bills say that all citizens must have access to "essential" services.

Underlying these general principles is a morass of contention, however. Take essential services. Does this mean fancy phone services and dozens of entertainment channels in every home? Or simply high-speed links for sending and receiving gobs of information? The pending legislation skirts the question, leaving it to regulators for later action. "We have to figure out what 'universal access' means," concedes Michael Nelson, senior adviser at the White House Office of Science & Technology Policy. "I don't think it means 24 hours of access to 500 channels of mud wrestling." What's more, the government will have to tax providers to subsidize services for the poor. That prospect already worries executives such as Silicon Graphics Inc. CEO Edward R. McCracken: "The open access issue is one tough nut," he concludes.

And that's just one pothole. Another set of questions is technological. Experts such as Michael Dertouzos, director of the computer science lab at Massachusetts Institute of Technology, worry that companies will build hub-and-spoke networks, delivering entertainment and services from a central point. That's a shadow of what he calls a "true information infrastructure," an Internet-like system where anyone can send and receive information to and from anywhere.

The creation of such a complex beast will test Washington's leadership. It will require government and industry working together to develop technology and standards so that messages and services can flow seamlessly among hundreds of proprietary networks. Otherwise, says Erik Grimmelmann, marketing director for new business services at AT&T, "there will be so many islands of disparate technology, people will stop investing and stop buying."

Industry also wants Washington to blaze trails that the market alone wouldn't explore—such as hooking up medical specialists with rural clinics, or convening electronic classrooms. In fact, the Administration has ambitious plans to fund demonstration networks in fields such as education and health care. Washington had better stop talking and start doling out money soon, says Larry L. Smarr, director of the National Center for Supercomputing Applications at the University of Illinois. The test beds will help answer crucial technological questions about how to package and route multimedia information, he explains. If the NII is built before the answers are in, huge chunks might rapidly become obsolete. "The private sector is gearing up so fast that without help from the government, it could make some expensive mistakes," Smarr adds.

Imagine that the nation avoids all these mistakes, and that all back roads lead to the Info Superhighway. Digital nirvana? Not yet. Inevitably, experts say, sleaze and crime—pornography, gambling, scams—will flow down the gutters of the Infobahn. The potential for abuse will be enormously magnified by the amounts of data in the system. "Everything we read, spend money on, or do will literally be a database," says Fred W. Weingarten, executive director of the Computer Research Assn. He adds: "Many people believe that privacy will be the nightmare issue of the NII."

In fact, the controversy has already begun. The Administration favors two initiatives that horrify privacy advocates. One tries to coax industry to use an encryption technology, the so-called Clipper chip, that lets government listen in on otherwise secure communications. The other is proposed legislation that would give federal agents and cops unprecedented authority to watch every move people make on-line. Not only are these schemes worrisome, they could prevent companies from putting on the superhighway new services that can't be engineered to permit access by law enforcers—things as seemingly innocent as personal phone numbers or call forwarding. This in turn "could really hamstring the advancement of technology," says Stephen T. Walker, president of Trusted Information Systems Inc., a Glenwood (Md.) maker of computer security software.

The good news is that on all these issues, the White House is still listening. There are Administration task forces on everything from R&D policy and intellectual property to privacy and universal service. And for the first time in years, industry believes that government takes its views seriously. If the Clintonites can keep it up, maybe Uncle Sam will manage to do the right thing—on purpose this time. □

Wanted: One Smart Balancing Act

The Clinton Administration wants to hook up CEOs and couch potatoes alike to an Electronic Superhighway of information and services. But this will present formidable challenges for government policy.:

NURTURING NEW TECHNOLOGY Messages and data won't flow seamlessly unless government and industry set common standards. But those can't be too rigid, or the technology will rapidly become obsolete.

DEREGULATING THE MARKETPLACE Increased competition must be allowed among cable, phone, and computer companies if the superhighway is to be built. Too much deregulation, however, might give one segment unfair advantage.

ENSURING UNIVERSAL ACCESS Left to itself, the market may create an "information underclass." Uncle Sam has to make sure everyone has access to "essential" services.

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MAKING THE GRADE: JAPAN IS CONSIDERING SPENDING BILLIONS TO PUT MORE PCs INTO ITS PUBLIC SCHOOLS

A GAME OF CATCH-UP

In computer literacy and availability, Japan is surprisingly deficient

BY NEIL GROSS

After breezing through the 1980s, Japan's industrialists have awakened to some harsh realities. Manufacturing prowess alone isn't enough anymore. What's required is a new industrial structure built around ideas and service. And when it comes to using the primary tools for this—personal computers and networks—Japan is far behind.

That realization has triggered a paroxysm of national purpose. Companies are snapping up network gear and software. Executives flock to seminars on U. S.-style "reengineering." And bureaucrats are ready to bankroll a national transformation. "Japan is firmly in a catch-up mode," says Tokyo University economics professor Yutaka Umezawa. "It's a mode we understand very well."

There's a lot of ground to make up. Japan has one-third as many PCs per capita as the U. S. Only 10% of Japanese businesspeople use them, and only 13% of those are connected to networks vs. 50%-plus in America. That's not all. In the U. S., where cable TV reaches 66% of homes, coaxial cable could become the ramp to the Information Superhighway. In overregulated Japan, just 10% of homes are wired. Few of the modest computer networks at universities, government agencies, and companies can communicate with one another. And regulations throttle linkups to America's Internet.

Japan's new focus is on surmounting these obstacles. The Education Ministry and prefectural governments want to spend $2.6 billion to place 22 PCs in each primary school and 42 in each junior high by 2000. Last year, the Finance Ministry allocated $4 billion for "new social infrastructure," such as school PCs and supercomputer networks. Meanwhile, the Ministry of International Trade & Industry (MITI) and the Science & Technology Agency have projects to develop "friendly" computer interfaces that respond to voice commands and gestures. If Japan can replace keyboards, which aren't really designed to handle thousands of Japanese characters, it may overcome the most imposing barrier to computer literacy.

Even the conservative Ministry of Posts & Telecommunications (MPT) is mobilized. It recently dropped geographic restraints on cable-TV companies, in-

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vited equity stakes from foreign companies, and deregulated the cellular-phone market. Next, it plans bonds with U. S. designers of the Information Superhighway. That "should assure [technical] compatibility" between the two countries, says Yoshio Utsumi, MPT's international affairs director-general.

The private sector is on board, too. Within the past year, the presidents of both Fujitsu Ltd. and NEC Corp. have vowed to link every employee via e-mail by 1995. While sales of mainframe computers dwindle, a new survey by Japan's largest computer trade group shows demand for local-area-network (LAN) gear surging 50% a year, to reach $5 billion by 1996. Demand for network software will grow even faster, approaching $2 billion by then.

The latest converts are individuals. Subscriptions to NEC's commercial PC network have ballooned to nearly 700,000 from 58,000 in 1989. Revenues of a similar service from Fujitsu quintupled in the same period, reaching nearly $100 million. Twenty-somethings are driving the growth, and the next generation is even more plugged in: Bandai, Takara, and other toymakers sold 500,000 electronic organizers to school kids last year.

To be sure, none of this will quickly narrow the U. S. lead (charts). And Japan has a history of false starts in such efforts. But this time, experts say, things could be different. Managers are desperate to improve efficiency. A new generation of network gear is available, most of it already proven in the U. S. And PC price wars plus a strong yen have placed this gear within reach. "We're seeing the same alignment of the planets that drove client-server computing in America," says technology consultant John C. McCarthy, a director at Boston-based Forrester Research Inc. To integrate new technology, Japanese businesspeople are gorging on reengineering theory. Since November, they've snapped up 250,000 translated copies of the U. S. best-seller *Reengineering the Corporation*, by Michael Hammer and James Champy.

Where the Japanese consensus breaks down is over the issue of labor. Economic bears paint two bleak scenarios: In the first, Japan's corporate goliaths bumble into the 21st century with bloated payrolls, while nimble competitors in America and Asia snatch their prey. In the second, Japanese companies chuck lifetime guarantees, and Japan drowns in a sea of unemployed.

Most Japanese economists are more sanguine. "Redundant managers will get snatched up by small and medium-sized companies," says Tokyo University's Umezawa. "Long-term, Japan faces a labor shortage." Some recent developments support his theory. Among others, phone giant Nippon Telegraph & Telephone Corp. is shedding about 30,000 jobs, mainly through transfers and attrition. But some of that excess has already been absorbed by fast-growing computer companies, including top foreign firms.

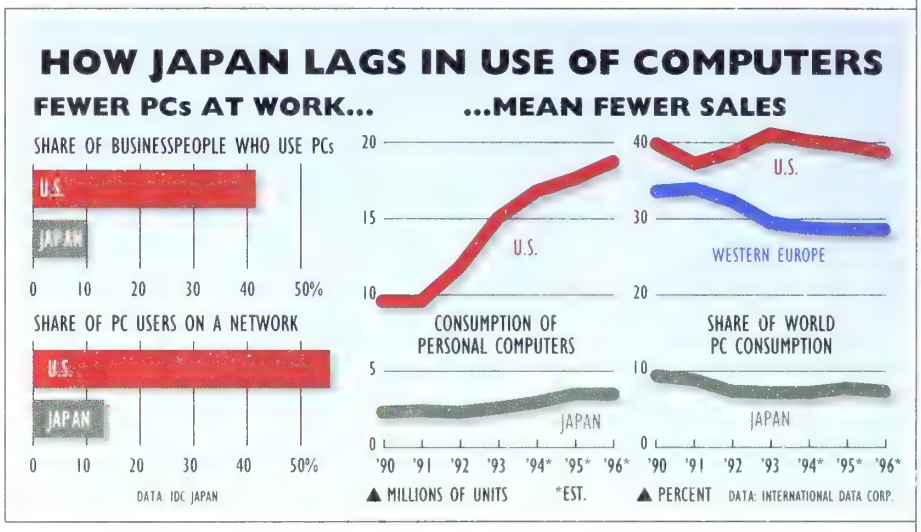
If that trend continues, Japanese business could be more fundamentally transformed than at any point since World War II. Deregulation in telecommunications, health care, and other industries could vaporize 4.1 million jobs and $314 billion worth of demand over the next decade, predicts the Japan Research Institute. But 5 million jobs should spring up in their place, adding $429 billion in demand for new products and services. The telecommunications ministry sees a $1.2 trillion Japanese multimedia industry taking shape by the year 2010, employing 2.4 million people.

Americans are of two minds on all this. Small U. S. companies shudder at the prospect of facing off with deep-pocketed Japanese rivals in Asia. But in many ways, the alternative—Japan unwired—seems worse. Japanese university and government libraries are gold mines of science, engineering, and economic data, most of it now inaccessible to U. S. researchers. "The whole discussion in the U. S. is how to use the Internet to tap into Japanese databases," says Stephen Anderson, visiting professor of government at the University of Virginia.

Japan's information revolution also presents Americans with a major sales opportunity. Last year, Apple Computer shot past Fujitsu to become the No. 2 PC supplier in Japan. And Japanese sales of network supplier Cisco Systems of Menlo Park, Calif., rose 150%. "Just getting a foot in the door used to be agony," says American Electronics Assn. official David Pollack in Tokyo. "Now, if you've got a hot network product, doors swing open." Indeed, salesman Steve Gibson at Spider Ltd., a Boston supplier of network protocol software, recalls a recent fax he sent cold to 30 potential Japanese partners requesting interviews. "I had a one-third hit ratio," Gibson laughs. "I never got that cold-calling in the U. S."

This doesn't mean that trade barriers will crumble, or that Japan's information economy will be a perfect mirror of America's. "There's still no venture-capital infrastructure," complains Yasufumi Kanemaru, president of Tokyo-based Future Systems Consulting. At the National Center for Science Information Systems, director-general Hiroshi Inose sees another difference. In America, the Pentagon funneled billions of research dollars into computer networks. By contrast, he says, Japanese government thrusts have been stingy and scattershot: "It took a major recession to trigger the first substantial subsidies."

Inose may be seeing the glass as half-empty, however. Japanese industry rewrote the rules of mass production in the '70s with no Pentagon for support. There's nothing to say it can't happen with information technology. This time, though, the gap is quite wide. And the U. S. is no longer a sitting duck. □



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BRAVE OLD WORLD

Just the prospect of deregulation has European companies eager to spend big on new products and services

BY GAIL EDMONDSON

When Andy Hopper turns on his computer, it knows him: It automatically loads his files and scrolls to where he was on his home PC the night before. This magic is performed by a "smart" badge that emits an infrared signal every five seconds to update Hopper's workstation. In five years, he believes, the intelligent network that makes this possible will extend worldwide. For now, though, Olivetti's head of research is honing the network's software in Cambridge, England, at one of two labs where hundreds of Olivetti techies are trying to help make Europe an information economy. "We're not talking about science fiction," he says. "The technology underneath it is there."

There—and bottled up for now by the state-run monopolies that dominate European telecommunications. But that's changing. The prospect of voice-telecommunications deregulation, scheduled for 1998, is prompting European companies to clinch partnerships and pour millions into new products and services. Many are launching trials elsewhere to cut their teeth in competitive markets. France's giant Alcatel Alsthom, for one, has a pilot project with Pacific Bell to deliver digitally compressed movies for Hollywood studios. That would eliminate the need for film and save studios up to $300 million a year in distribution costs.

There's more. In Britain, which deregulated phone services in 1984, developers of multimedia networks are keeping pace with those in the U. S. Europewide, newly-allowed competition in data and cellular communications is pushing prices down and spurring growth in services. And those markets give bruisers such as Pacific Telesis, MCI Communications, Sprint, British Telecom, and AT&T beachheads to attack the Continent's phone giants.

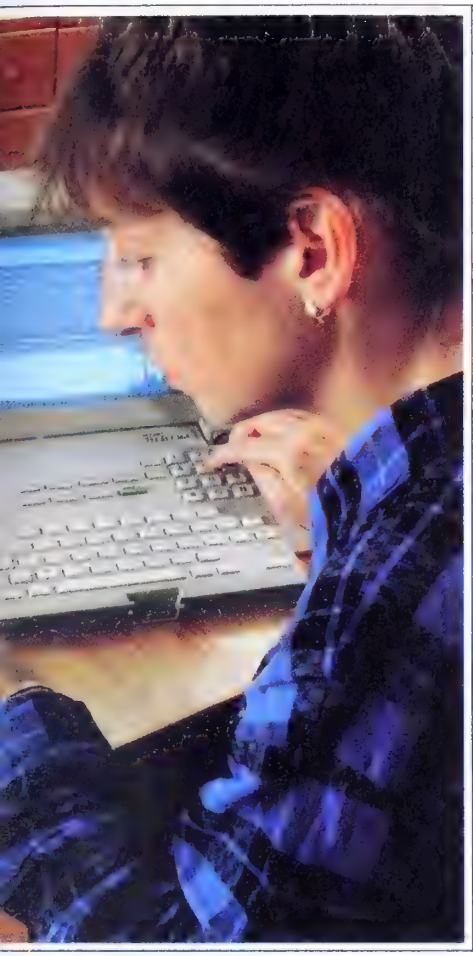
Politicians fear the fallout that will come as the monopolies are forced to eliminate jobs. But there's no hanging back "if Europe wants to regain global competitiveness," asserts Christian Schwartz-Schilling, Germany's former Minister of Post & Telecommunications. Europe's industries need good, cheap data and voice systems. And even as Europe's youth protest falling living standards, politicians grasp that information industries may help spur growth and cut its unemployment rate, now 12%. France's low-tech Minitel videotex service has created 350,000 jobs in a decade, and some forecasts say telecommunications will generate 7% of Europe's gross domestic product by the year 2000 vs. less than 4% today. "This is not about nice new technologies. It's about stimulating economies," says Lord David I. Young, chairman of Britain's Cable & Wireless PLC. "We do not have much time."

Not much, but maybe just enough. Software king William H. Gates III believes it will take up to six years, even in the U. S., to develop markets for multimedia. That may be the window Europe needs to jump into the race, says

Hans G. Geyer, head of Intel Corp.'s European operations: "We Europeans either get in front on technology, pricing, and brands, or we are dead."

Accordingly, the European Union plans to invest $76 billion in the next five years for advanced networks, interactive video services, and the like. An EU task force set up last Feb. 7 could help force the pace. On June 24, it will issue a report likely to recommend letting competitors build their own networks instead of leasing expensive lines from former monopolies. France is mulling such a move in 1998, when the voice monopoly ends, and others may follow. Says Bruno Lasserre, France's Director of Post & Telecommunications: "Only infrastructure competition will create new jobs and wealth."

That's why nearly every potential player is launching pilot projects. In February, Bertelsmann, Kirch Group, and Deutsche Bundespost Telekom started Media Service, a $116 million Berlin-based joint venture that will deliver digital programs and phone services in Germany. Bertelsmann's U. S. subsidiary said on Apr. 4 that it will enter the global market for multimedia games, entertainment, and education.



FRANCE'S LOW-TECH MINITEL SERVICE HAS CREATED 350,000 JOBS IN JUST A DECADE

Britain, meanwhile, is in a league of
s own. British Telecommunications
LC and a dozen major cable operators
an to invest $37 billion over the next
x years in networks that would carry
deo, voice, and data to businesses and
omes. Laws that let the same company
ll cable-TV and phone services over
e same network—still verboten in the
. S.—may make Britain the world lab
r multimedia. Indeed, Baby Bells such
Nynex and U S West say their British
int ventures are further along than
eir U. S. operations in building the In-
rmation Superhighway.

One business where Europe is devel-
oing powerful muscle is wireless com-munications: Europe's $5.8 billion market for mobile communications is expected nearly to triple to $15.9 billion by 2000, says Prognos in Basel, Switzerland. Thanks to a Europewide standard for digital cellular networks, it's already possible to cross most borders without interruption in service. In fact, the standard, which is called GSM and has been adopted by 17 countries in Europe, 16 in Asia, and 15 in the Middle East, makes Europe a more homogenous market than the U. S., where there are still two competing digital standards. So companies such as Apple Computer are tailoring digital wireless faxes, personal communicators, and other devices to the European market first.

In a curious twist, Europe's belated deregulation may move it past the U. S. by eliminating local and long-distance monopolies at once. "We intend to leapfrog," says Herbert Ungerer, an EU telecommunications expert. Some even see Europe's monopoly markets disintegrating before their scheduled 1998 phaseout. A huge fissure opened on Apr. 11, when 30 European-based manufacturers, led by Rank Xerox, chose British Telecom and an AT&T-led consortium to build competing private networks that will bypass local phone companies with more sophisticated services. To some, the deal was hailed as the de facto end of phone monopolies in the EU.

Other cracks are appearing daily. Denmark's phone company decided last month to sell excess capacity to third-party resellers, a move that will cut prices. "The result will be that Europe will liberalize sooner rather than later," says Ben Verwaayen, head of PTT Telecom Netherlands, the Dutch phone company. Agrees Lord Young at Cable & Wireless: "Low prices drive out high. If European phone customers can access the world through Denmark, it will force prices down throughout Europe."

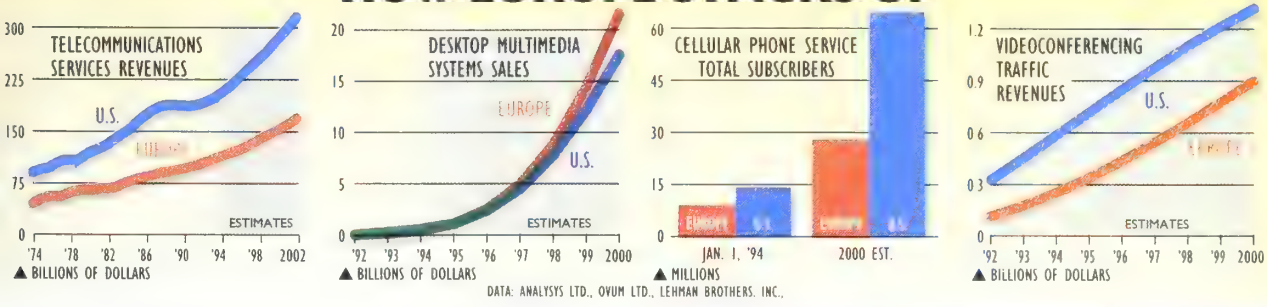
Huge utilities with fiber-optic connections to millions of homes also want a piece of the voice market. France's water utility, Compagnie Générale des Eaux, is installing a radio-transmission system in a Paris suburb to compete for local calls. "We intend to create local networks for multimedia," says Alain Bravo, head of telecommunications at the water company. German energy giant Veba, with fiber-optic links to 300,000 homes, created a phone division in April and is talking with Digital Equipment Corp. about a joint venture in multimedia services.

The established carriers, meanwhile, are trying to protect their turf with partnerships. On Apr. 12, France Telecom joined Sony, Motorola, Fujitsu, and AT&T in taking a stake in General Magic, a Silicon Valley producer of intelligent-network software. And Deutsche Bundespost Telekom, whose high-priced videotex service failed in the 1980s, announced a Mar. 10 deal with Intel to sell multimedia services, including videoconferencing, in Germany. "This stuff can revolutionize how you communicate and how you do business," says Geyer.

No doubt some of the Euro-euphoria over new markets will evaporate as governments grapple with knotty regulatory issues and standards. And Europe's phone monopolies will continue to crimp competition where they can. But the genie is out of the bottle. As information industries converge, Europe's phone-company dinosaurs must change or face extinction.

With Julie Flynn in London and Patrick Oster in Brussels

HOW EUROPE STACKS UP



DATA: ANALYSYS LTD., OVUM LTD., LEHMAN BROTHERS, INC.

CHART BY JAIME BEAUCHAMP/BW

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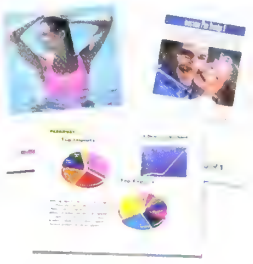

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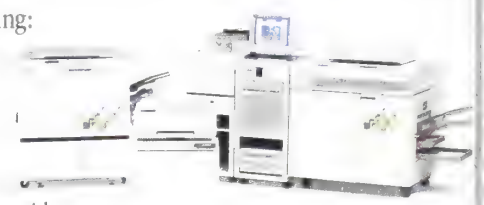

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THAI DISH: DESPITE GLITCHES, TELECOM SYSTEMS ARE UP AND RUNNING IN MUCH OF ASIA

THIRD WORLD LEAPFROG

In building networks, developing countries will skip past entire stages of technology

BY PETE ENGARDIO

For seven years, Japan's Seiko Epson Corp. has found South China to be a ne source of low-cost labor. But for ainpei Misawa, Epson's Hong Kong-sed manager of information systems, it s also meant "many, many head-hes." Shuttling troubleshooters from ong Kong into Epson's two factories, nere 5,000 workers churn out 100,000 inters monthly and more than 100 odels of Seiko watches, involves rambling for tickets on constantly over-ooked trains. Fax lines often produce egible copies or go dead in tropical storms. A simple change in manufacturing specifications can mean putting floppy disks on the next delivery truck bound for China.

Misawa's headaches are about to go into remission, however. Thanks to high-speed digital-communications circuits that will be installed by yearend, both plants will be connected to Epson's regional electronic flow of up-to-the-minute inventory, delivery, and output data that make possible just-in-time production. And engineers in Japan will be able to transmit specs for new products to the factory floor in seconds.

Epson is just one example of a transformation that should greatly boost living standards in the developing world. Places that until recently were incommunicado are rapidly acquiring state-of-the-art telecommunications that will let them foster both internal and foreign investment. It may take a decade for many countries in Asia, Latin America, and Eastern Europe to unclog bottlenecks in transportation and power supplies. But by installing optical fiber, digital switches, and the latest wireless transmission systems, urban centers and industrial zones from Beijing to Budapest are stepping into the Information Age. Videoconferencing, electronic data interchange, and digital mobile-phone services already are reaching most of Asia and parts of Eastern Europe. And in Latin America, where only 7% of the population has access to a phone, the demand for communications has created the fastest-growing cellular market in the world.

All these developing regions see advanced communications as a way to leapfrog stages of economic development. Widespread access to information technologies, for example, promises to speed the transition from labor-intensive assembly work to "value-added" industries that involve engineering, marketing, and design. "Multinationals want to set up where the infrastructure is the best it can be," says Lloyd Kubis, Motorola Inc.'s regional director of telecommunications government relations for the Asia/Pacific region. Modern com-

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IBM

unications "will give countries like hina and Vietnam a huge advantage er countries stuck with outmoded chnology."

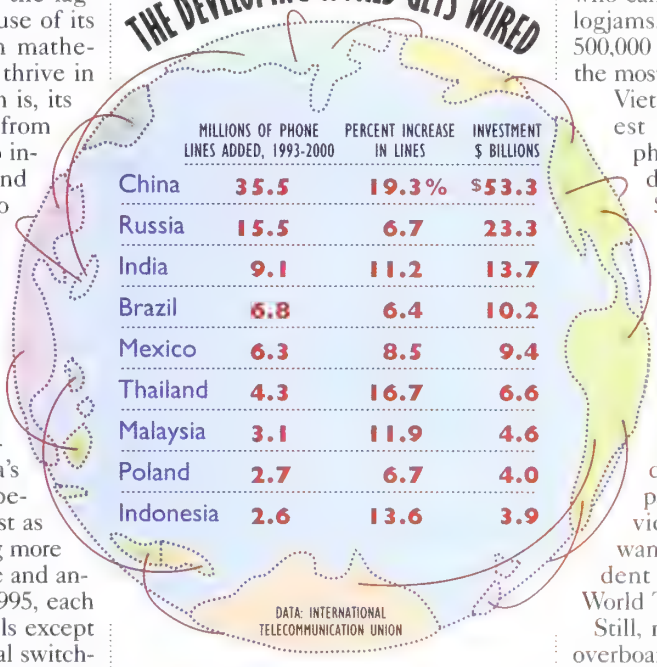
How fast these nations should push ead is a matter of debate. Many ana- sts think Hanoi is overdoing it by re- iring that all mobile phones be ex- nsive digital models, when Vietnam desperate for any phones, period. These countries lack the expertise in eighing costs and choosing between chnologies," says John Ure, director telecommunications research at the niversity of Hong Kong.

Still, there's little dispute that com- unications will be a key factor separat- g the star performers from the lag- rds. Consider Russia. Because of its rong educational system in mathe- atics and science, it should thrive in e Information Age. Problem is, its tional phone system dates from e 1930s. Russia is starting to in- all fiber optics and has a grand an to pump $40 billion into rious communications proj- ts. But it's too broke to do rapidly.

Compare that with China. ver the next decade, it plans pour some $100 billion into lecom equipment, adding million phone lines by the ar 2000, four times the num- r it has now. In a way, China's ckwardness is a blessing, be- use the expansion occurs just as w technologies are becoming more st-effective than copper wire and an- g systems. By the end of 1995, each China's 26 provincial capitals except hasa in Tibet will have digital switch- and high-capacity optical fiber links Hong Kong, Singapore, Taiwan, and hailand. This means that major cities ch as Beijing, Shanghai, and Guang- ou are getting the basic broadband in- astructure to become interchanges on e Information Superhighway. "When a untry goes from no infrastructure to e latest, it will leapfrog entire rungs development," says John J. Legere, T&T's managing director of consumer rvices for Asia.

Telecommunications is also a key to hanghai's dream of again becoming a emier financial center. Citibank, Mer- l Lynch, and Morgan Stanley already ve offices in the city, the hub of Chi- 's fast-growing stock and bond mar- ets. To offer the razzle-dazzle electron- data and paperless trading global vestors expect, Shanghai plans broad- band networks as powerful as those in Manhattan.

In Eastern Europe, meanwhile, Hungary also hopes to vault into the modern world. Currently, 700,000 Hungarians are waiting for phones, and businesspeople regularly rank poor phone links as a chief headache. So for the past three years, the country has been laying optical fiber. To speed the import of Western technology, in December Hungary sold a 30% stake in its national phone company to Deutsche Bundespost Telekom and Ameritech International Inc. To further whittle the waiting list, Hungary has granted a license to Pannon, a Dutch-Scandinavian consortium, to build what it says will be one of the most advanced cellular digital communications systems in the world.



In fact, cellular is one of the most popular ways to get a phone system up fast in developing countries. It's cheaper to build radio towers than string lines across a country, and businesses eager for reliable service are willing to cough up the significantly higher tolls for a cellular call—typically two to four times as much as for calls made over fixed lines. Look at Latin America, where cellular demand and usage have exploded in every country.

For cellular providers, in fact, a LatAm franchise is the proverbial license to print money. BellSouth Corp., with operations in four Latin wireless markets, estimates its annual revenue per average subscriber at about $2,000, vs. $860 in the U. S. That's partly because LatAm cellular customers talk two to four times as long on the phone as their North American counterparts.

Thailand is also turning to cellular, as a way to allow Thais to make better use of all the time they spend on the road. A lack of planning despite years of more than 8% growth has left Bangkok virtually paralyzed in traffic, discouraging foreign investors. And it isn't that easy to call from the office: The waiting list for phones has from one to two million names on it. So cellular phones have become the rage among businesspeople, who can remain in contact despite the logjams. The result: There are nearly 500,000 cellular subscribers in Thailand, the most in any Southeast Asian country.

Vietnam is making one of the boldest leaps. Currently, it has one phone for every 435 people. But despite per capita income of just $220 a year, Hanoi wants the best. All of the 300,000 lines it plans to add annually will be optical fiber with digital switching, rather than cheaper analog systems. By going for next-generation technology now, Vietnamese telecom officials say they'll be able to keep pace with anyone in Asia for decades. "Vietnam will be capable of carrying any network services a global company could want," says James R. Long, president of Northern Telecom Ltd.'s World Trade Div.

Still, many believe Vietnam is going overboard—and point to its experience with cellular phones as proof. After Ho Chi Minh City awarded two licenses for analog cellular systems, Hanoi mandated that all networks elsewhere in the country be digital. The result: Thousands of analog phones have been sold, compared with fewer than 200 digital phones, which cost twice as much. Plus, the digital phones won't work on analog systems, so if you travel between the two systems you need two phones.

Still, for countries that have played catch-up for so long, the temptation to do so in one jump is hard to resist. And despite the mistakes they'll make, they'll persist—so that one day they can cruise alongside Americans and Western Europeans on the Information Superhighway.

With Ken Stier in Bangkok, Peter Galuzka in Moscow, and bureau reports

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THE ENABLING TECHNOLOGY

Chips, switches, lasers—the Superhighway is being paved with a bewildering mix of materials. And they're all evolving at a dizzying pace

54 OVERVIEW
FASTER, SMALLER, CHEAPER
Modest but continual gains move technology relentlessly forward. From disk drives to fiber optics, what's powerful now will soon be passé

60 CUTTING EDGE
THE KEYS TO THE FUTURE
We identify—and explain—the 10 critical technologies that will pave the Superhighway:
Hardware: *Tinier, mightier chips; stronger optoelectronics; parallel processing to do the job quicker; disk drives that store more and more*
Software: *Programs with "object technology"; artificial-life forms; computers that hear voices*
Communications: *Wireless in the digital age; ATM switches; data compression*

76 INTERVIEW
THE WORLD ACCORDING TO ANDY GROVE
Intel's chief executive talks about how the new rules will affect the way we do business in the Information Age.

FASTER, SMALLER, CHEAPER

Continual advances in technology are propelling the digital beast relentlessly forward. From disk drives to fiber optics, what's powerful now will soon be passé

BY PETER COY

In the 1920s, "high frequencies" denoted the upper usable bounds of the radio spectrum. Before long, though, the term became obsolete. As technology advanced, it became possible to use higher frequencies. Those were called "very high frequencies"—VHF. Another step forward in electronics, and still more virgin airwaves opened up. With a stab at finality, scientists dubbed them "ultrahigh frequencies," or UHF. Turns out they weren't so ultra after all. Today, two regions lie beyond UHF: superhigh frequencies and extremely high frequencies, which run up to the border with infrared light—300 billion cycles per second. "High frequencies" are considered laughably low.

Very, ultra, super, extremely: The rapid devaluation of superlatives is a hallmark of the Information Revolution. Progress is so rapid that what is powerful today will be passé tomorrow. Million-dollar vacuum-tube computers with fearsome names like ENIAC that awed people in the 1950s couldn't keep up with a 1990s pocket calculator. In 1956, the first transatlantic phone cable carried 50 compressed voice circuits. Now, optical fibers carry 85,000—an improvement of 170,000%. Wall Streeters call colleagues in London as casually as they dial the deli downstairs. It seems inevitable that these achievements—and the Information Superhighway that is so capturing the popular imagination today—will look quaint to our grandchildren.

Propelling this march are unceasing advances in the core, enabling technology of the Information Revolution. Each year, advances in microchips, optoelectronics, and other building blocks make possible new products and services that bring more people into the Information Age. These newly aware customers soon demand new features, and the virtuous cycle continues. Extrapolating from today's trends, for instance, it's a cinch to predict that by early next century, supercomputing power will be in the hands of graphic artists, podiatrists, and kindergarten teachers.

Such powerful tools will likely change society. Microchips in cars will make driving safer. Virtual reality will help medical students learn anatomy, while giving schoolchildren the wraparound experience of traveling to distant places. Software agents will act as virtual valets, managing appointments and passing along choice bits of information. And those are just the predictable consequences. Information technology will continue to remake the world in ways that are impossible to guess—just as no one in 1950 could have predicted laptop PCs or drive-up machines that spew $20 bills on command.

If the Olympic motto is "faster, higher, stronger," the Information Revolution's maxim might be "faster, smaller, cheaper." There's probably a limit to how fast Carl Lewis can run 100 meters, but the speed of a computer chip seems to have no fundamental barrier. Every time an insurmountable hurdle is sighted, someone finds a way around it. For example, recent breakthroughs in tran-

tor design have destroyed the long-ld notion that silicon-based chips ould hit a wall around the year 2000 age 60). Now, researchers see silicon's e extending another 15 or 20 years. Strictly speaking, of course, the laws physics aren't up for repeal, but it sure ems that way at times. Thirty years o, Intel Corp. Chairman Gordon E. oore observed that the density of com-ter chips was doubling every year or While Moore himself has wavered ely—"I think that the rate of evolu-n is going to be much slower than 've seen it in the past," he said last ar—his observation has proven accu-e for so long that it has been st as Moore's Law.

Technology com-nies are betting big money that Moore's Law and other formulations of progress will continue to hold true. "I firmly believe it's going to happen," says Robert W. Lucky, vice-president for applied research at Bellcore, the research-and-development consortium of the Baby Bells. "If you don't believe it, you make the wrong investment decisions."

For sure. While lots of companies have gone down in flames by betting on immature technologies, waiting can be just as costly. At AT&T's Bell Laboratories in the mid-1970s, Lucky helped design a switch that would handle calls in digital code. AT&T decided not to manufacture it, though, arguing that anything a digital switch could do, an analog switch could do more cheaply. They were right—briefly. But within a couple of years, digital had the edge. Canada's Northern Telecom Ltd. beat AT&T to the market with a digital switch and gained nearly half the U. S. central-office switch market, which it retains to this day. Now the battle is moving to Asynchronous Transfer Mode switches (page 72), which will adeptly handle the high-speed flows of video and data.

A corollary to Moore's Law of chip advancement is that progress in software lags—sometimes painfully—behind hardware. Programming for handwriting recognition is a case in point. Former Apple Computer Inc. Chairman John Sculley drew widespread ridicule—in Garry Trudeau's *Doonesbury*, among other places—by trotting out the Newton personal digital assistant before its software was capable of distinguishing "A-bomb" from "elbow." Sculley's impatience was typical: No matter how rapidly enabling technologies advance, it's never fast enough for businesspeople hoping to score a market victory with a technological deus ex machina.

Slowly but surely, software technology is improving. Programmers will conquer

handwriting some day. Meanwhile, researchers are concocting whole new kinds of software such as "agents" that will assemble a personalized newspaper or TV show for you by snatching passing traffic on the Infobahn. At Massachusetts Institute of Technology's Media Lab, assistant professor Pattie Maes is taking a first step by working on agents that screen and prioritize electronic mail.

This year's most vexing technological challenge is "video-on-demand," which would let sofa spuds watch any movie, any time. Delivering on that promise turns out to require technologies that are not quite ready for prime time. For instance, storing a movie digitally on a disk is far more costly than keeping it in analog form on a videocassette tape. And building a switched network for sending customized feeds to each household is astronomically more expensive than the tree-and-branch distribution system of today's typical cable-TV operator. Time Warner Inc. is discovering as much in its "full-service network" trial in Orlando, which is being delayed six months or more, to late this year.

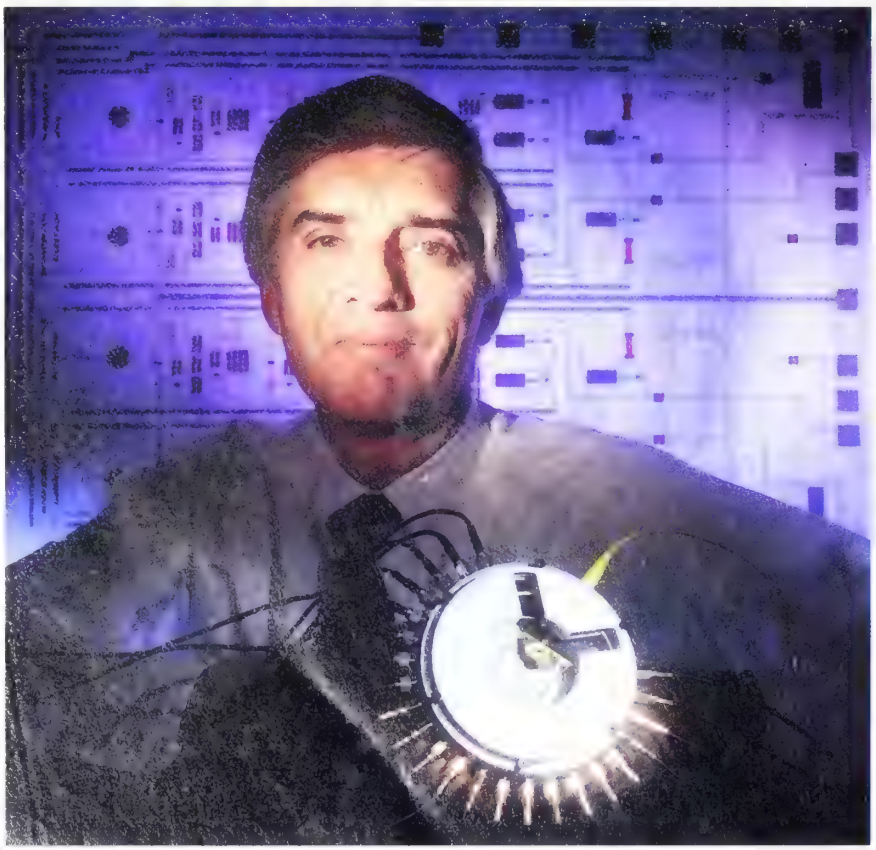
VIRTUAL CADAVERS
MED STUDENTS WILL GET A LEG UP ON ANATOMY CLASS WITH "DATA GLOVES"

Of course, a bit of overreaching is healthy. The pursuit of profit drives companies to attempt the impossible. Then it's up to the scientists and engineers to rescue the overpromising CEO from disaster by pushing the technologies forward with all their might. Sometimes the progress they make is stunningly rapid. The race for cheap, compact data storage is a case in point. Today's silvery optical disks—storing everything from video games to encyclopedias—are limited because the tiny lasers that read them can't focus on data that are packed too tightly. To increase storage density, researchers are developing lasers with shorter wavelengths—"blue" lasers, in the lingo—that can focus on smaller dots on the disk. NEC Corp. estimates that blue lasers will more than quadruple capacity within five years.

Blue lasers are only the short-term solution for data storage. The 21st century solution is pure blue sky: One concept, pioneered by IBM, involves using lasers to tweak individual molecules in a crystal. If the technique can be refined, it could allow a trillion characters to be stored in a block the size of a sugar cube. In an even more radical concept, researchers from Nippon Telegraph & Telephone Corp. are exploring how to craft molecular-scale disk drives that spin by the same principle as the propeller-like tails, or flagella, of some bacteria. Don't count on seeing flagella in your local Radio Shack any time soon—this kind of work is strictly R&D.

Construction of the Information Superhighway will demand innovation on many fronts, including storage, switching, display, and, importantly, compression. Today's leading standard for compression of video, MPEG, is based on the work of a French mathematician named Baron Jean Baptiste Joseph Fourier, who died in 1830. A genius, to be sure—but how could Fourier have known that someday people would apply his theories to digitally squeezing *Roseanne* and *America's Funniest Home Videos*? Further breakthroughs in video compression may depend on new mathematical concepts such as wavelets—or, someday, artificial intelligence that crudely "understands" what it's seeing in order to store it more compactly. For instance, a common backdrop could be stored once, instead of rerecorded every time it appears.

Sometimes, critical technologies for the Information Age emerge straight from the world of physics. That was the case with the transistor, which laid the



A FISTFUL OF LASERS
BELLCORE'S LUCKY SAYS THE PACE WON'T SLACKEN

rnerstone of electronics nearly 50 years
). This year, there's another potential-
explosive physics breakthrough: "giant
agnetoresistance," an ultrasensitivity
tiny magnetic fields. Although the
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years ago, IBM and other companies
already exploiting it for prototype
k drives. The first giant magnetoresis-
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. The scientists aren't trying to build
tical networks that mimic electronic
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—advanced by writer George Gilder,
hong others—that all conversations
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stead, the 50-person Bellcore team en-
ions a setup in which signals are for-
rded along by simple devices on the
sis of the wavelength—or color—of
eir light.
Such engineering savvy isn't the ex-
usive property of $1 billion-a-year op-
ations like Bellcore. Next time you're in Brooklyn, hop the D train to Brighton Beach to see how one tiny company is exploiting advances in wireless with a two-way network that competes with cable television. Cellular Vision of New York is broadcasting 43 TV channels at 27.5 billion cycles a second. This extremely high frequency, mostly unoccupied, allows for higher fidelity than standard broadcast channels. Cellular Vision's opponents presented engineering studies claiming that the system wouldn't work. Bernard Bossard, the inventor, refuted them—first on paper, then by building a working system. With the backing of such investors as Bell Atlantic Corp. and Philips Electronics, Cellular Vision has a license to expand throughout New York and its northern suburbs.

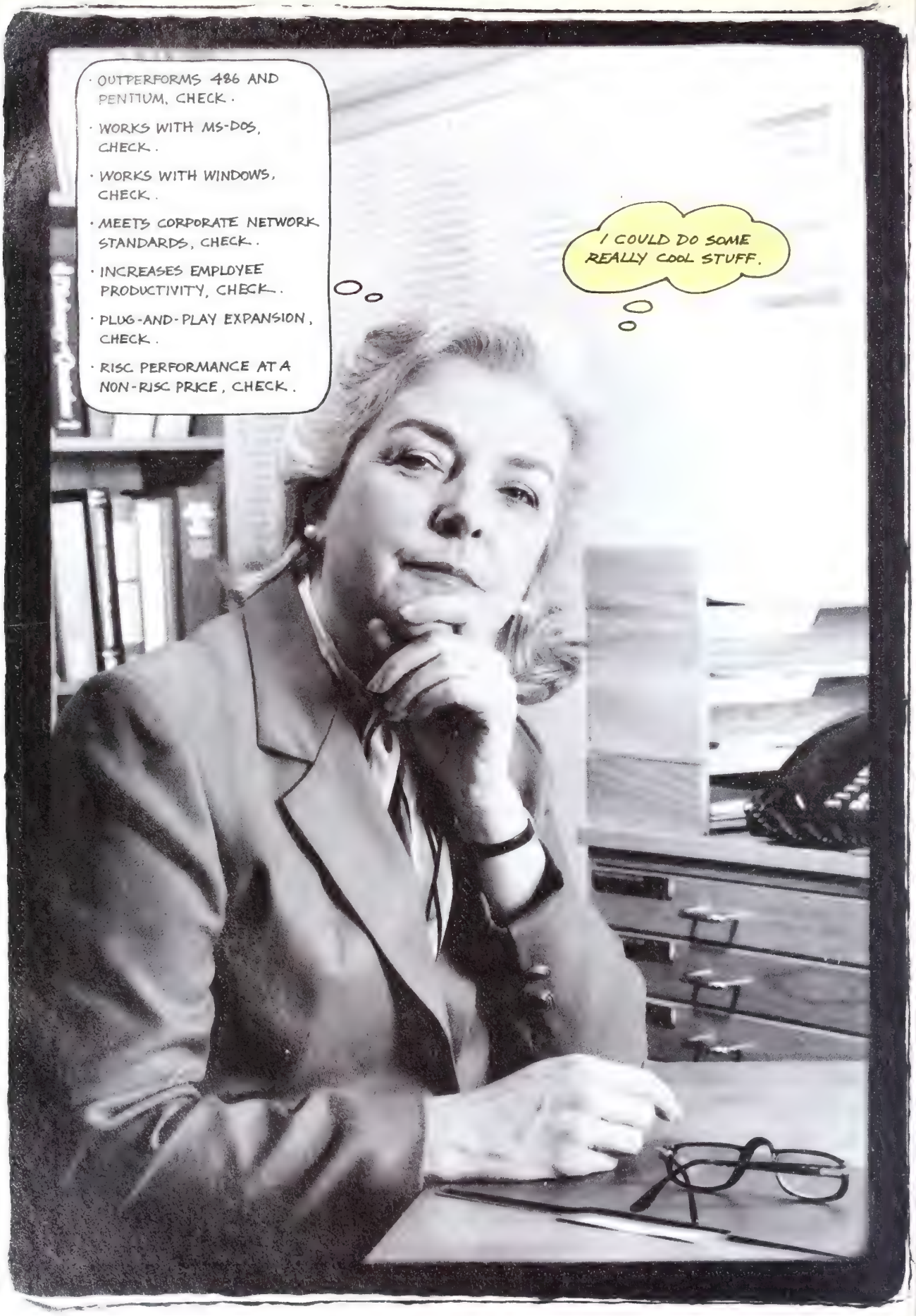
Picking such winning ideas is getting harder than ever as technologies and industries converge in the digital age. Much current innovation involves cross-fertilization, as televisions, telephones, computers, and wireless communications devices gravitate to the same digital realm. That's speeding up progress and making it less linear—i.e., less predictable—at the same time. Patrick Griffis, vice-president of the Business & Engineering Center of Matsushita Electric Corp. of America, likens the technological atmosphere to the instability of an animal population when its fertility rate is pushed too high. Says Griffis: "We've entered a period of chaos. The event horizon is getting shorter and shorter."

Aswirl in the maelstrom of bits, bytes, and gigahertz, it's easy to forget that the purpose of all these enabling technologies is to bring forth something worth having. In the end, the actual use is often far different from the planned one. A communications protocol that was designed for a network that would be less vulnerable to nuclear attack has evolved into the Internet, which today primarily carries e-mail—the global digital coffee klatsch of the '90s. Nothing wrong with that, of course; people bend technology to their needs. To take another example, neural networks—rough analogs of the human brain—are being tested by the U.S. Postal Service to read handwritten Zip Codes that conventional scanners don't get.

Sloppy writers never need know that a neural network is cleaning up after them. The more powerful technologies become, the more they blend into the background: Think of the memory-gobbling Windows program from Microsoft Corp., whose entire purpose is to conceal the idiosyncrasies of computer architecture from the innocent non-techie user. In the 1990s and beyond, information technologies will grow so powerful that they may eventually fade from view like the Cheshire Cat, until only the grin is left. □

ARTIFICIAL-LIFE FORMS
AT MIT, MAES IS CREATING "SOFTBOTS"—PROGRAMS THAT MAY DO SUCH TASKS AS SIFT THROUGH E-MAIL

RICHARD SCHULTZ


· OUTPERFORMS 486 AND PENTIUM, CHECK.
· WORKS WITH MS-DOS, CHECK.
· WORKS WITH WINDOWS, CHECK.
· MEETS CORPORATE NETWORK STANDARDS, CHECK.
· INCREASES EMPLOYEE PRODUCTIVITY, CHECK.
· PLUG-AND-PLAY EXPANSION, CHECK.
· RISC PERFORMANCE AT A NON-RISC PRICE, CHECK.
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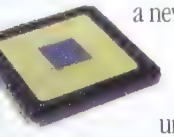
At the heart of Power Macintosh is the PowerPC™ 601 microprocessor: the first of a new family of ultra-high-performance RISC chips developed in a unique three-year collaboration between Apple, IBM and Motorola.



The PowerPC 601 has a lot of power inside it: the combined resources of IBM, Motorola and Apple

The RISC technology of Power Macintosh brings a whole new level of performance to personal computing. Software written to take advantage of its unique new capabilities, in fact, will run significantly faster than the same programs written for 486 or Pentium processor-based PCs.

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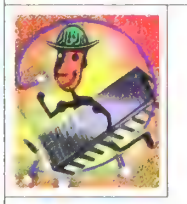
THE KEYS TO THE FUTURE



Nothing is final. Better mousetraps come along all the time—not in one neat package, necessarily, but bit by bit. Here's the shape of things to come: The 10 critical technologies of tomorrow

HARDWARE

Semiconductors

For 20 years, the Information Revolution has been built on sand—silicon-based chips, that is. Each year, by cramming more circuits on a memory or microprocessor chip, engineers have made computing technology cheaper, more plentiful, and more adaptable to new uses. Without those annual improvements, the spread of information technology would slow, and new applications just slightly beyond our grasp—accurate weather forecasts, interactive TV, or computers that understand whatever you say, for example—might not be practical.

Until recently, scientists had nagging doubts about the future of silicon. They feared that by around 2000, they would run up against physical barriers—a size below which silicon transistors couldn't work. That would require shifting to other, more costly materials. But that supposed size limit has now been lifted by new research at AT&T Bell Laboratories, Hitachi, NEC, Toshiba, and other labs. "As far as we can see," says Paul M. Horn, IBM's director of silicon technology research, "there's no science limit for the next 30 years."

In other words, chipmakers will continue doing what they have always done: divining ways to scoop out ever-tinier trenches for the pipelines that carry data around silicon real estate. The more plumbing that's buried in each silicon plot, the more magnificent the edifices that electronics engineers can erect for crunching numbers, routing telecommunications traffic, or presenting a friendly face to users. Smaller is thus always better—yet never good enough.

The progress so far has been astounding. When Intel Corp. developed the microprocessor in 1971, the year after it invented the dynamic random-access memory (DRAM) chip, the state of the chipmakers' art enabled engineers to lay down lines that were 6.5 microns (millionths of an inch) wide. That yielded 2,300 transistors on a chip the size of a thumbtack. Memory chips held 1,024 bits, and microprocessors were capable of slowly crunching eight bits of data at a time. Seven technology generations later, chipmakers are etching circuits that are just 0.5 microns across, making it possible to cram up to 35 million transistors on a chip. The result: DRAMs that can store 16 million bits of data and 64-bit microprocessors that are 550 times as powerful as the first Intel chip, or about the speed of a 1986-vintage IBM 3090 mainframe.

What's in store? A continuing exponential growth in processing speed and storage capacity: In reducing line width by 50%, the number of possible transistors doesn't just double—it jumps more than tenfold. And as the circuitry gets more dense, you get another performance boost: With everything scrunched

PUSHING THE STATE OF THE ART

	1993	1996	1999	2002
SMALLEST LINE WIDTH (MICRON)	0.5	0.35	0.25	0.18
DRAM CAPACITY (MEGABITS)	16	64	256	1,024
MICROPROCESSOR SPEED (MEGAHERTZ)	150	300	400	500+

DATA: SEMICONDUCTOR INDUSTRY ASSN. & COMPANY REPORTS

er together, signals can zip more kly between transistors, so the mi- rocessor's heartbeat, or clock speed, be increased. Just a couple of years the microprocessors in most per- l computers ran at 25 megahertz. y, Intel Pentium chips run at 100 , while Digital Equipment Corp.'s diest Alpha chip cruises at 190 mhz. for reduced instruction-set comput- (RISC) chips such as Alpha or the /Motorola PowerPC, speeds could 400 mhz by decade's end and 500- mhz in 2002.

or the foreseeable future, at least, it ns that silicon will be able to match needs of an increasingly demanding ket. We'll move from today's 16- gabit DRAM chips to 64 megabits, then, around 1999, to 256. And the next-century memory chips will e an incredible one billion bits of —eight such chips could hold the *yclopedia Britannica*. Applying this making technology to microproces- will yield chips as powerful as an y-level Cray 3 supercomputer from y Research Inc. But the chip will a few hundred dollars, not a few ion. So whatever tasks get dreamed or tomorrow's computers, silicon has horsepower.

By Otis Port in New York

Optoelectronics

all it the invisible backbone of the rmation Age. Every melody from a player, every voice over long-dis- e phone lines, each page from a la- printer comes to you courtesy of a itous marriage of light and electric- known as optoelectronics. Without underlying technology, "there ldn't be an information infrastruc- ," says Edmond J. Thomas, execu- tive vice-president for science and technology at Nynex Corp.

Right now, fiber optics is making the biggest difference in telecommunications. Sophisticated lasers transform electrical representations of conversations, faxes, or data into pulses of light, which speed through the fiber to their destinations, where they are converted back into electricity. Today's most capable fiber telephone lines can carry a gigabit or two of information—roughly an *Encyclopedia Britannica*—in a second. That's a 10,000-fold improvement on copper.

The total market for optoelectronic components is relatively small, now consisting mostly of flat-panel displays in laptop computers. But without components such as a $2 laser in a CD player, entire categories of products would be impossible to build. That's why the U. S. Optoelectronics Industry Development Assn. (OIDA) says the technology is responsible for markets worth $50 billion today—and more than $200 billion within a decade.

Researchers continue to push the optoelectronic envelope. By recording information as holograms or using so-called blue lasers with shorter wavelengths to read more tiny "spots" on a disk, scientists may create devices with unheard-of storage capacity. Scientists now predict they'll be able to pack perhaps 18 trillion bits of data on a single 12-inch platter (page 63). With new lasers and optical switches, they're pumping data over fiber at 10 gigabits per second and figure on hitting 100.

What this could mean is an explosion of low-cost, high-speed communications capacity and the ability to store floods of digitized video and sound—two key components of the Information Superhighway. But there's a catch: cost. "Much of the current effort is aimed at driving the cost down—in some cases, down two orders of magnitude [by a factor of 100]," says Davis Hartman, head of an optical interconnection research group at Motorola Inc.

Breakthroughs in manufacturing would help. One possibility, being developed by startup Photonics Research Inc. in Longmont, Colo., is fashioning entire arrays of hundreds of lasers on a single wafer, instead of individual devices. Such arrays not only cut costs greatly but also offer better performance in everything from printers to high-capacity networks. At the Naval Research Laboratory, researchers have etched patterns directly onto optical fibers as the glass is being made. The result is an inexpensive optical sensor that can be threaded through plane wings or skyscraper walls to warn of stresses and strains. With such advances on the horizon, the role of fiber optics will become anything but invisible.

By John Carey in Washington

Parallel Processing

You and 10 friends could paint your house a lot faster than you could paint it by yourself, right? If you understand the logic of teaming up to compress the time it takes to get a job done, you've already got the basic idea behind parallel processing, the key technology pushing the power curve on upcoming generations of large-scale computers.

The appetite for computer power remains boundless. Today, the digitalization that is converting TV, movies, magazines, and phone calls into the 1s and 0s of computers is putting undreamed-of demands on computing hardware. Even the most powerful supercomputer processor alone is no match for the job. Which is why parallel processing will be a critical technology in making multimedia and the Information Superhighway move from hype to reality.

In parallel processing, computer archi-

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Storage

ects achieve Superhighway peeds by lashing together nywhere from a couple to any hundred processors and pro-ramming them to work in concert. Soft-are divvies up tasks among all the pro-essors—much as you might ask Ed to aint the porch while Sue starts on the indow frames. The trouble is, coordi-ating those processors—making sure hat the right processor gets the right iece of information at the right time—tough.

But progress is being made. Just a few ears ago, parallel processing was the rovince of scientists and engineers. ow it is moving into the mainstream, rimarily for applications that require uge databases. Wall Street firms are sing parallel computers to tear through eal-time data to evaluate financial in-ruments. Wal-Mart Stores, Hallmark ards, and American Express are track-g the daily spending patterns of thou-nds of consumers. And companies uch as Bell Atlantic Corp. are using assively parallel computers to act as ideo servers" as the companies begin test video-on-demand.

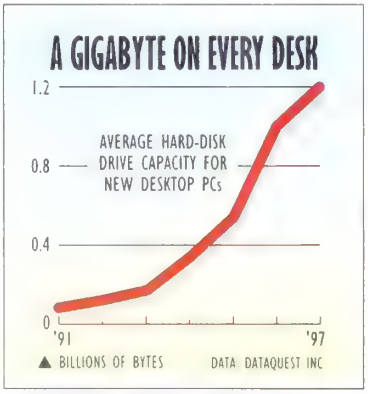
In the not-too-distant future, parallel achines may be the only form of upercomputers, mainframes, or high-nd network servers that survive. IBM ecently brought out its first parallel-ar-hitecture mainframe and sells massive-parallel machines for engineering. ther major computer makers—includ-g Unisys, Hewlett-Packard, Silicon raphics, and Sun Microsystems—are witching to parallel computers, too. "At ast in advanced computing," says in-ustry analyst Gary Smaby of the Sma-y Group, "there won't be anything that n't parallel processing in the next three five years."

Eventually, parallel computing will ove to the desktop. Already, some or-anizations are using networks of work-ations to simulate one giant parallel achine, running big database programs r crunching scientific equations when ey are idled at night. And single PCs ay need parallel power to keep up ith demanding applications, such as peech recognition. Engineers at Intel orp. say there are no hardware barriers linking multiple microprocessors on single chip. That holds out the prom-e of an intriguing technological oxy-horon—a single/multiprocessor. Sounds eird, but it could give computers the ower to keep the Information Revolu-on churning.

By Russell Mitchell in San Francisco

Can conventional disk drives—the devices that have been keeping data on magnetic platters for the past 20 years—keep up with the demands of the Information Superhighway? After all, a single digitized movie takes about 2 billion bytes to store, and the typical personal-computer hard disk stores only 210 megabytes.

The answer: yes. If routine technical improvements stay on track, by 1996 it will be common to have inexpensive hard-disk drives with a billion bytes of capacity in desktop PCs. After that, there will be an extra boost in bytes from ultra-sensitive recording heads that use an electrical phenomenon called magnetoresistance (MR) to pack data more densely on the disk. MR—so far made only by IBM—has doubled the pace of storage capacity improvements since 1992. Now, most drive-makers are experimenting with "giant MR," which could boost storage density thirtyfold by the year 2000.



Mechanics and materials are improving, too. More precise positioning mechanisms will allow heads to fly closer to the disk surface to read denser data. Drivemakers such as Seagate Technology Inc. are trying out ceramic and glass disks, which are harder and flatter—so more can fit in one drive disk stack.

Storing multimedia images, as well as spreadsheets and e-mail, presents special challenges. As drives warm up, they interrupt data flows briefly to adjust recording-head position. Nobody notices such delays with conventional data. But interrupting continuous streams of video means blurry pictures. So Quantum Corp. and Hewlett-Packard Co. have designed drives that calibrate heads with no delays.

Diskmakers have other tricks, too. Faster controller chips and a new digital formatting scheme will team up to move data faster from disk to screen. The data may come from multiple drives in one big box, called disk arrays. These devices are popular in data-processing shops and can economically store the data needed for instant video-on-demand.

Back on your desktop computer, big improvements in CD-ROM drives are in the works. First, Japanese component makers are working on lighter laser heads that can be moved more quickly across a disk. An even bigger boost will come from spinning disks faster—to enable a CD-ROM to handle up to six times the 150 kilobytes a second the basic CD churns out now. Also on tap: lasers using narrow blue beams to read denser data than red lasers can handle (page 61).

In short, diskmakers are determined to prove that their technology has a lot of life left. Says IBM Vice-President Christopher Bajorek: "We're probably decades away from any fundamental obstacles that would inhibit the progress of these technologies."

Indeed, even in the age of video-on-demand, disks will remain the workhorses of the Information Revolution. And other forms of storage won't go away, either: When a customer orders up a movie, it will be copied from disk arrays onto high-speed semiconductors. When the movie isn't likely to be viewed often, it will be erased from the disk and transferred to tape. Predicts Dataquest Inc. analyst J. Philip Devin: "The whole storage industry is going to thrive." More important, so should its customers.

By Robert D. Hof in San Francisco, with Neil Gross in Tokyo

SOFTWARE

Object Programming

When "object technology" emerged in the 1980s, experts hailed it as a way to make programmers more productive, speeding new applications to market and finally getting corporate computer departments caught up on their backlogs. That's a pretty daunting order for a fledgling technology. Now, experts are hoping for something more: They're figuring that object software can play a pivotal role in making incredibly complex information networks manageable and usable.

THE OBJECTIVES OF OBJECT PROGRAMS

- Make program-writing faster and software more reliable by using pre-fab building blocks.
- Let different applications share common functions.
- Mix and match objects to customize.
- Break down barriers between different applications and types of computers.

The idea behind object technology is to break computer programs up into neat packages, called objects, which then serve as building blocks for larger programs. With programs made of objects, programmers are free to borrow objects from other programs or purchase them, rather than reinventing the wheel every time. To add functions, they can simply add new objects.

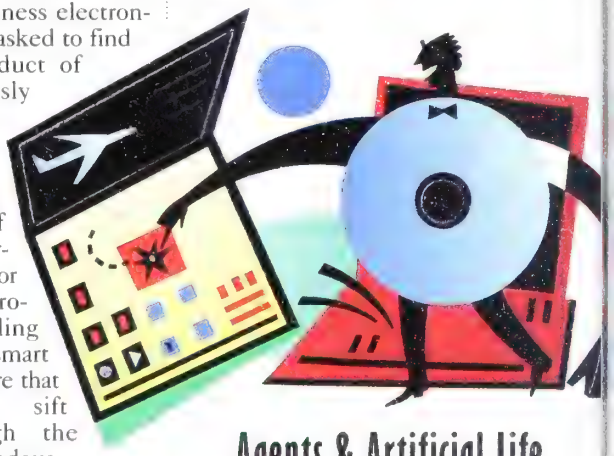
A huge potential payoff from object technology stems from binding programming and data, rather than separating them as in conventional programming. So an object called "customer X" would include not only all data about the customer but also some computer code for communicating with other objects. That way it can respond when an object called "marketing survey," asks for data on customers. And these objects can also work across networks. So a manufacturer in England looking for a better flame-retardant plastic might be able to send an object around a network to talk to other objects at research labs in California to find a suitable material.

As information networks spread and as more special-purpose objects are created, all the computers on the network gain new powers—powers that will make it far simpler for people to find information and do business electronically. A searcher object, asked to find the gross national product of Peru, would relentlessly scour the network until it came to an object that "knew" the answer. The same technique might make it easy for a chief executive to glean important facts about a client or competitor. "Object programming is an enabling technology for creating smart software that can sift through the tremendous amount of information out there," says Rick Jackson, director of product marketing at NeXT Computer Inc. Before object software can do all that, however, software makers have to work out a standard way of managing all of the objects on a network.

Software makers are beginning their move to object programming. Both Microsoft and Taligent, a joint venture of IBM, Apple Computer, and Hewlett-Packard, are developing object-based operating systems, expected sometime next year. Rather than slowly adopting object-programming techniques, the industry "should make a complete change to object-oriented software," says Mike Potel, vice-president for technical development at Taligent.

Why? Not only can the new technology speed you to conventional computer information—documents, reports, databases, and so on—but it is far more practical for managing the pictures, video, and sound of multimedia, all of which can become objects. Another huge benefit: Objects promise to eliminate the need to shift from one program to another when you want to switch tasks. Each function—writing or calculating, say—would be an object, like a hammer or a screwdriver, that you would pick up as needed. That will erase the lines between applications—and the barriers to sharing information among them. That in itself would be a revolution: computers that work the way we do, instead of requiring us to learn their arcane ways.

By Fred Guterl in New York



Agents & Artificial Life

What is life? Scientists and philosophers through the ages have tried to answer that question by listing what seems to be unique to living organisms. Living things ingest food, for example, grow, reproduce, and finally die.

Now consider a computer. Can you create a program that embodies all of the definitions of "alive"? Researchers in the field of artificial life are doing just that. Their efforts could lay the groundwork for a new era of amazingly useful information systems. Across the world, programmers are creating artificial organisms from the primordial soup of digital bits that pulse through silicon chips. They float invisibly across the seas of computer networks, feeding on data, mating (passing on the characteristics of both parents to their offspring), grow-

WHAT DOES THE NEXT GENERATION WANT FROM US, ANYHOW?

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ing, learning, evolving, and even dying when their utility has passed.

Already, the techniques being learned by A-lifers are changing the way programmers build software. Rather than writing programs, A-life researchers unleash "genetic algorithms," strings of computer code that automatically generate new code and can combine like genes in an organism. They may evolve through random "mutations" induced by their creator or by "mating" with other successful programs. Unsuccessful offspring are killed off.

Researchers believe such programs are the most efficient way to solve problems with a huge number of variables. "If you can turn evolution loose on these problems, you might find solutions you wouldn't have thought of otherwise," says Christopher G. Langton, director of the artificial life program at the Santa Fe Institute, a private research group. At the Tokyo Institute of Technology, researchers are building genetic algorithms that may learn to schedule hundreds of processes in a factory. Supercomputer maker Thinking Machines Corp. is testing a genetic algorithm program called StarGene to sift thousands of pieces of data on millions of credit-card users to predict how the cards will be used. Several researchers are nurturing A-life programs to predict swings in the stock market.

A-life research also promises advanced software "agents," handy little programs that someday will sit in your computer and assist with tasks such as scheduling meetings or screening e-mail. Pattie Maes, a researcher at Massachusetts Institute of Technology's Media Lab, is working on agents called "softbots" or "nobots." An e-mail softbot might spot patterns in the way you screen your e-mail and encode the routine in software, say putting memos from the boss on top.

Conventional robots are getting new programs from artificial life, too. Rodney Brooks, a professor at MIT, is programming robots with the instincts of an ant, so they wander freely, feeling their way around obstacles or, if blocked, retracing their steps. Researchers in Japan are working on programs that can travel the Internet, following the sunset around the globe to perform their tasks on idle computers after business hours.

Some researchers are also exploring whole populations of programs. Langton has a Swarm Simulation System, in which agents learn to interact. Just as an ant colony seems to show more intelligent behavior than an individual ant, Langton hopes software swarms will take on more complex behaviors.

Can such programs be considered "alive"? The debate rages. One definition of alive, offered at an A-life conference: "that which dies when you stomp on it." Alive or not, A-life could soon become a tool in our lives.

By Richard Brandt in San Francisco

THE FRUITS OF "ARTIFICIAL LIFE"

SOFTWARE "AGENTS" may be able to act autonomously, learning how to solve problems

SOFTWARE CODE that automatically evolves using a "genetic algorithm"

COMPLEX COMPUTER SIMULATIONS will predict environmental, social, or biological trends

ROBOTS programmed to mimic the simple reasoning of insects may "learn" to find their way

Speech Recognition

Wouldn't it be great to deal with a computer on your own terms—say, by talking to it? That has been the dream of computer scientists for decades.

Continuous, speaker-independent speech recognition—where you could walk up to any computer and have it do your bidding, just like on *Star Trek*—still remains elusive. Today, software that helps computers recognize any person's voice—speaker independence—is limited in vocabulary. Computers can understand your "yes" or "no" when you're asked if you wish to accept charges for a collect call. They can help you program your VCR. But programs with big vocabularies, such as Dragon Systems Inc.'s 60,000-word dictation package, must be "trained" for each user and require the speaker to pause after each word.

With every improvement in microprocessing power, however, scientists come closer to full speech recognition. Since increased memory and faster processing let computers handle more variables, new systems don't need to be trained for every speaker. And imaginative software tricks, such as using context to predict the next word in a given sequence, are improving accuracy. "Context alone has made an immature technology mature for some applications," says speech researcher Kai-Fu Lee, Apple Computer Inc.'s director of interactive media.

At IBM and elsewhere, scientists are exploring programs that enable computers to expand their vocabularies through experience—figuring out, for example, when "bad" comes to mean something good. Another promising approach is to enable computers to discern inflection, as when a speaker's voice rises to signal a question.

A shortcut is to restrict the vocabulary according to topic, such as travel, weather, or sports. Fidelity Investment Co., for example, is evaluating speech systems that will let customers call in and ask the computer for quotes on mutual-fund prices, rather than tapping in codes on a Touch-Tone phone.

When will speech recognition be reliable and economical? At the current rate of progress, researchers say it will be another decade before speech recognition replaces the keyboard for most uses. Until then, it's unlikely that the Information Revolution will reach all citizens. "The only way that's going to happen is for computers to learn to understand what people say," says George R. Doddington, the Advanced Research Projects Agency official who distributes government money for speech research. Who knows? A few kind words, and computers might really become personal.

By Gary McWilliams in Boston

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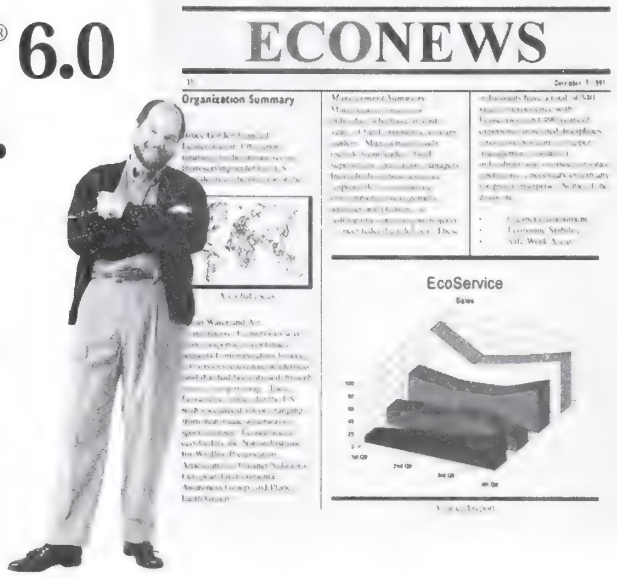

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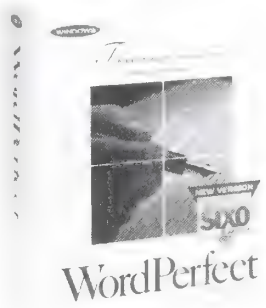

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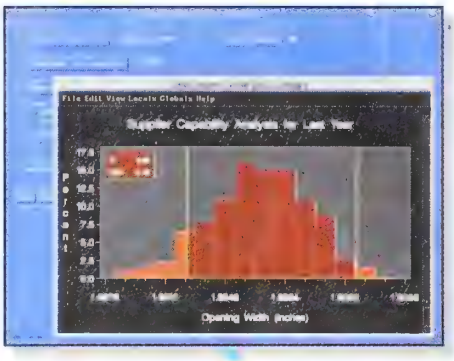

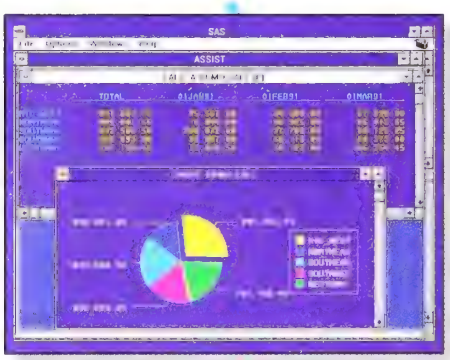

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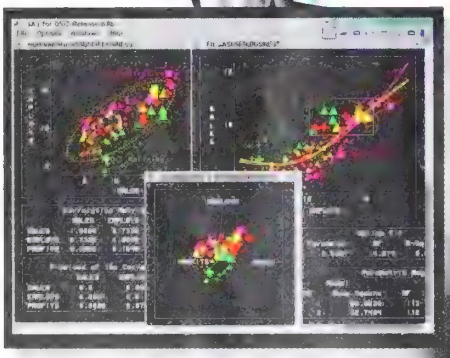

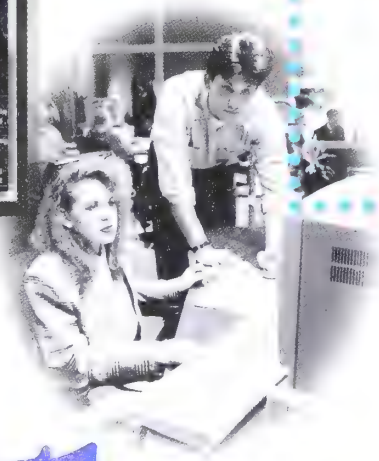

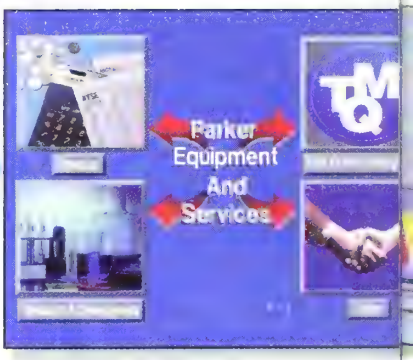

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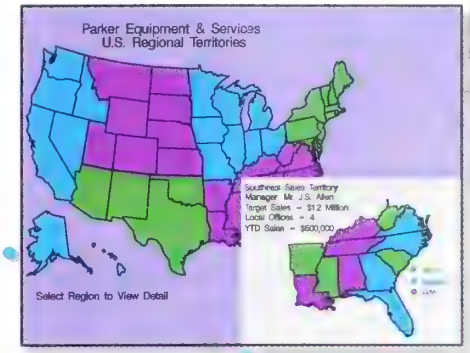

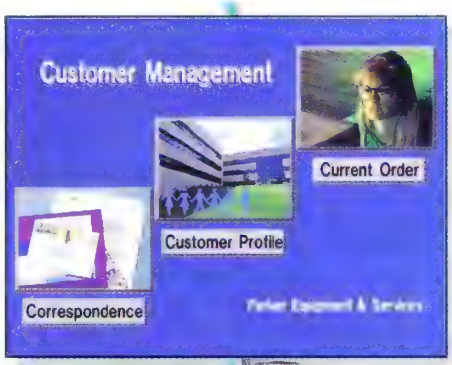

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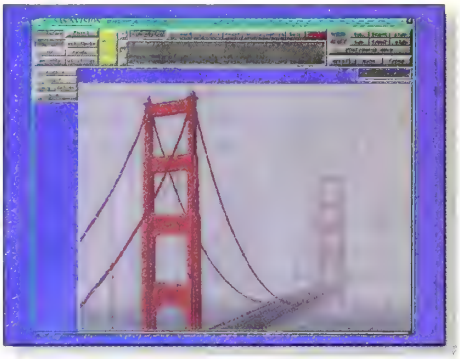

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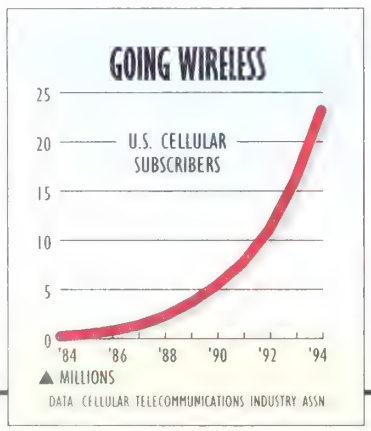
COMMUNICATIONS

Wireless

The promises of the wireless communications revolution are vast but can be summed up easily: high-quality voice and data service anytime, anywhere. Sounds good. But if you've tried calling at peak hours in Los Angeles or New York, you know today's cellular systems can't even guarantee consistent connections. So how is the brave new wireless world ever going to come about?

Technology, of course. Advances over the next decade promise to make wireless communications networks as capacious and reliable as fiber-optic lines. Within three or four years, wireless data could be transmitted at current wireline rates—double today's wireless data speeds—through the use of improved software and chip technology, particularly digital technology that will allow better compression.

Helping to prod the $10.9 billion cellular business into the digital age is an ambitious throng of newcomers that hope to wrest big chunks of the wireless market from such well-established giants as McCaw Cellular Communications, Sprint, and the Baby Bells. These upstart networks—personal communications services (PCS), enhanced specialized mobile radios (ESMRs), and satellite-based setups—are pushing wireless technology to new limits. Says Sprint's Cellular Vice-President Keith Paglusch: "The basic question is how much of the wireless market each will garner."



It will take several years for any of the new networks to challenge cellular. The most ambitious, the Teledesic Corp. satellite venture being funded by McCaw and Microsoft Corp. Chairman William H. Gates III, won't be ready until 2001.

In the meantime, cellular operators are moving slowly to digital to expand capacity and improve quality. One route is Time Division Multiple Access (TDMA), a technique that splits a channel into three time slots to handle three calls at once, compared with one call per channel on analog. McCaw has TDMA equipment in place in New York and other cities.

But most cellular companies are looking for a bigger punch by using Code Division Multiple Access (CDMA). It promises a 10- to 15-fold capacity improvement using a technology called "spread spectrum" that distributes a digitized message across a wide range of frequencies. On the receiving end, the phone reassembles the signal. Irwin M. Jacobs, president of CDMA developer Qualcomm Inc., says the technology will be widely available in 1995.

More immediately, cellular companies are beefing up the ability of their networks to handle data so that customers with wireless modems in notebook PCs can receive e-mail and other messages. McCaw has begun rolling out a system developed by IBM called cellular digital packet data (CDPD), which transmits "packets" of data through sparsely used radio channels or during gaps in conversation. But CDPD works best for short files that can be sent quickly.

By the time cellular operators have CDMA systems in place, they are likely to face new competition from ESMR setups. These networks, using frequencies allocated for radio dispatch, already handle digital voice, data, and paging—in a single receiver. Spearheaded by startups such as Nextel Communications, CenCall, and Dial Page, ESMR networks are now operating in only a few cities, however they are expected to go nationwide by 1996.

But the biggest threat to the cellular order is likely to be PCS. A variation on cellular technology, PCS divides an area into many "minicells." That means that handsets to send and receive data and voice can be smaller and cheaper. PCS operators say their systems will work indoors and out so a single PCS handset will be your home and mobile phone.

The ultimate wireless advance will be truly unlimited communications. Motorola Inc.'s multibillion-dollar Iridium project, using 66 satellites, will guarantee customers willing to pay a stiff price the ability to call from any point on the planet. But by the time it's operating in 1998, it may amount to nothing more than "pie in the sky," says Ira Brodsky, president of DataComm Research in Wilmette, Ill. With all the advances in land-based wireless, the only place the "anytime, anywhere" promise won't easily be fulfilled may be the Gobi Desert.

By Kevin Kelly in Chicago

ATM Switches

We're all being conditioned to expect immediate gratification in the digital age—with a click of a button we'll summon Hollywood movies, stock quotes, electronic shopping services, or simply dial a phone call. But we may all be in for a wait—at least until a new switching technology, known as Asynchronous Transfer Mode (ATM), comes into widespread use. When it does, ATM's ability to funnel billions of bits to where they're needed "will make the network to end all networks," says analyst Paul D. Callahan of Forrester Research Inc.

ATM's trick? It divides the information into tidy packages, or cells, of 53

bytes each. The cells are coded, or stamped with an address, and then zipped over the network at high speed. A switch at the other end reads the coding and reassembles the phone call or e-mail message at the other end. The speed is amazing: AT&T says its ATM switch can pump 20 gigabits of data—or 1,600 copies of *Moby Dick*—every second.

Impressive. But relatively few corporations or telephone companies have ATM. The holdups: The lack of fully standardized equipment and software—so that all ATM brands can work together—and steep prices. Which means companies such as U S West Inc., a Baby Bell, are holding back. ATM would probably help U S West's planned interactive-TV trial. But Russ Skinner, director of video engineering for U S West Communications, doesn't believe that's the case: "Today, ATM is not mature enough or cost-effective enough to put in the network."

That could soon change. A 530-member industry consortium, called the ATM Forum, is hammering out standards. The two-year-old group is now tackling two critical issues: The first is a standard for emulating local-area networks that will let computer users link up with ATM networks; the second is congestion control—how to control data flow when enormous numbers of people attempt to call up the same material at the same time.

ATM Forum President Fred Sammartino predicts that a standard for the local-area-network emulation is just around the corner, while one for congestion control should be completed by early next year.

At the same time, ATM switch prices are falling. Today, switches for high-speed corporate systems and large phone networks can cost up to $3 million, while switches for small networks cost $1,500 per port, or user. Prices are still steep, but they've been cut in half each year since 1991 and are expected to keep falling as ATM becomes more broadly adopted.

In a few years, prices will likely fall to a "few hundred dollars" per user, says James Chiddix, senior vice-president of Time Warner Cable, which is launching an interactive-TV pilot in Orlando using ATM switching technology. Chiddix adds: "Today, ATM is limited. But that's about to change in an explosive way." When it does, the digital deluge can commence.

By Kathy Rebello in San Francisco

Compression

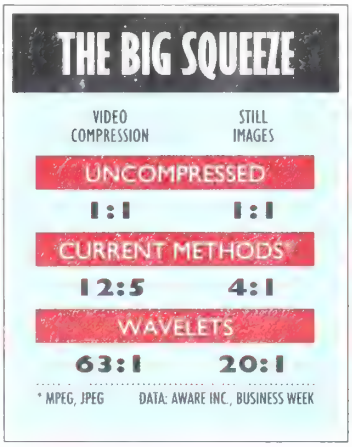
Despite advances in semiconductors, disk storage, and optoelectronics, there may always be a struggle to accommodate all the electronic traffic and find a place to park digital information when it's not in use. And that will keep the pressure on compression—the science of squeezing reams of digital data into less space.

Advances in the mathematics of compression have already yielded impressive results. The Joint Photographic Experts Group's standard compresses still images into one-fourth the space. The Motion Picture Experts Group (MPEG) has agreed on two standards, MPEG1 and MPEG2, to compress video. They work by stripping out redundant information—say, the mountain in the background—between one frame and the next, so the computer only needs to deal with the information that changes. MPEG reduces the full video signal from 250 million bits per second to 1.5 million for VCR quality. Now, using MPEG and ultrasensitive electronic circuits, researchers are able to transmit four channels of TV over ordinary copper phone wires—an impossibility a few years back.

But experts say that progress in compression may be slowing. "We've already thrown away 99% of the video signal," says John Forrest, chief executive of National Transcommunications Ltd., a satellite-equipment manufacturer in Winchester, England. "Now, we have reached a technological plateau." And moving beyond MPEG could be essential for making interactive TV and other advanced video services possible. The problem? Although decoding an MPEG signal is quick and cheap, encoding one is time-consuming and expensive.

There are some promising developments that could pay off—someday. Engineers have achieved impressive compression ratios using algorithms based on fractals, a branch of chaos theory. Fractals work well on images of landscapes and seascapes made up of recurring patterns, but for most video images, quality tends to suffer. And like MPEG, fractal images are costly to encode. "On balance, fractals don't appear to work any better than MPEG," says Jules A. Bellisio, executive director for video signal processing research at Bell Communications Research in Red Bank, N. J.

Wavelet theory is a more enticing alternative. Wavelet algorithms are very efficient at dividing the video image systematically into blocks and then describing each block with relatively concise mathematical equations. As a result, wavelet algorithms are as quick encoding an image as decoding it. And since they do not rely on predicting motion between frames as MPEG does, wavelet images tend to retain higher quality. Still, wavelet images can have lines on the screen that reveal the image's blocklike structure, even in video that's termed "broadcast quality." The lines disappear only at compression ratios almost as low as MPEG's.



Another solution may lie in combining compression with more sophisticated display technologies. The human eye transmits vast visual information to the brain even though the retina is a poor data pathway. Researchers suspect a video display with a web of thousands of tiny microcomputers—one for each picture element, or dot, of the video screen—might be able to generate good video images with far less data than conventional videos now require. Such a display might emerge in 5 or 10 years. If not, we could stall in traffic on the Information Superhighway.

By Fred Guterl in New York

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THE WORLD ACCORDING TO ANDY GROVE

How the new rules will change the way we do business in the Information Age

No technology has done more to spur the Information Revolution than the microprocessor. And no company has done more to make the microprocessor the dominant technology of the age than Intel Corp. But Andrew S. Grove, Intel's chief executive officer, plays down the notion of a technology revolution—perhaps because he has seen a political revolution. After fleeing the Hungarian Revolution in 1956, Grove came to the U. S. and in the 1960s became a pioneer in what was becoming known as the Silicon Valley. BUSINESS WEEK Senior Editor Geoff Lewis and San Francisco correspondent Robert D. Hof recently caught up with Grove at Intel's Santa Clara (Calif.) headquarters.

In the 1980s, low-cost, increasingly powerful microprocessors led to essentially "free" computing power, a phenomenon that reordered the computer industry and spread information technology everywhere. Now you're talking about "free bandwidth"—an explosion of low-cost, high-speed telecommunications capacity—as the big technology thrust of the 1990s. What's it all about?

The switching equipment's capabilities are being increased at the same rate as computing capabilities were increased in the '80s. But more important, with most of the information content becoming digital, the task of sending large amounts of data over the existing infrastructure, even larger amounts of data, becomes economically possible. Digital data, and bandwidth for digital data, is going to be cheaper and more plentiful.

gitally distributed information is go- to be available at lower and lower t.

Sounds like the Information Superhigh- y. But that's a term you object to. Why?

Growing bandwidth and lower-cost ndwidth is a trend that creeps up on and will creep up on us throughout decade and into the next decade. It esn't *arrive*. What frustrates me about s is these are lazy people jumping m slogan to slogan without realizing, h a little bit of due diligence, that s stuff is around and has been gradu- growing, and gradually we are go- digital.

All of a sudden, the Internet has be- me the cat's meow. For 20 years, the ernet grew and grew and grew. But w it's the metaphor for s stupid highway stuff. no way or shape or m do I think that this he model for the high- , because it's not high- ndwidth at all.

Whether it's called the In- mation Superhighway or nething else, doesn't the S. need an advanced in- mation infrastructure to o competitive in the 21st tury?

think it is vital. And I nk it is happening. My oblem with painting s undefined thing neplace in the future is u end up waiting for s nirvana instead of fol- ving the evolutionary ocess that is happening lay.

Does the collapse of some of the big Infor- tion Superhighway deals and delays of eractive-TV trials signal problems in that lution?

The notion that the cable infrastruc- e was going to do the equivalent of itched telecommunications was very rd for me to understand. The ques- n I would ask is: Is that notion going ay because the deals collapse, or is it e other way around? Maybe those als are collapsing because of the grow- realization that so many miles of er optics to the curb does not a ecommunications system make.

[Unlike the phone system,] cable is t symmetrical, not point-to-point. It one point to many. If movie delivery were it, the cable network is, in fact, pretty competent to do that now. If, in fact, the application is transactions between individuals, it's a whole different set of characteristics. Both require bandwidth, both are connections, but they are very different.

What will the bandwidth be used for?

I think movies are not it. I never thought so, and I still don't think so, because people don't interact with movies. On the other hand, a shopping catalog is it. A salesperson that I can interact with to place the order or ask a question *is* it. I suddenly get new features from my computing infrastructure. The only feature I get [with movies] is I get it when I want it: "I want *Casablanca* and I want it now." Big deal. As compared to me being able to buy ski equipment, talking to an expert real-time, browsing in the catalog, asking questions, making buying decisions. You don't like that example? Fine, maybe it is coming in commercial sales.

Companies that use e-mail are much faster, much less hierarchical

What if you're wrong?

People are taking different approaches, and they will course-correct. Whoever wins is going to have the advantage of being down the road longer and further than the others. But the rest of them are going to chase after them and compete. That's how all these things seem to work. Business is a big experimentation—one big ongoing experimentation—when you really come down to it.

I absolutely buy that digital-format entertainment delivered to the home is going to have a role. It might even be big over time. But it will not drive and shape the development of the infrastructure and the use pattern. The typewriter wasn't used first to write personal letters.

So your bet is that the high-bandwidth networks will be used primarily for doing business?

I think the most important use is going to be to transact something over distances—basically communications applications. That's the most important application that information technology *has* had. One of the most dramatic applications of computers is airline reservation systems. The reason it's so dramatic is that you bridge time and place to reserve a seat on a flight that is at a different time and a different place, while sitting at the counter. It's a communications application.

As such applications spread, how will it change the way we do business?

You can see that businesses that have pervasive use of electronic mail operate differently. It squeezes all the slack out of the system. It also gives you the opportunity to course-correct much more rapidly. Therefore, decisions or moves don't necessarily need to be agonized over. You can kind of try out thoughts and conduct debates much more rapidly.

Companies that use e-mail are much faster, much less hierarchical. You can only use e-mail effectively, though, if you do it yourself. From the moment you do it yourself, you're available to anybody and everybody. The elimination of the screening process in my e-mail, being a trivial example, tends to lead to a kind of a more democratic way of operating—whether it's inside a corporation, inside a country, or across countries.

How will this change companies?

There are two companies—one that operates this way and one that doesn't, competing with each other. How long will the one that doesn't compete stick

around? Somebody is going to do it, and therefore you're either going to do it or you disappear.

That suggests that technology is deterministic—sort of like a force of nature that can't be bottled up.

I agree with that. You can retard it, but the cost of retarding it is generally high. You can make the same case about competitiveness in general, not just in technology. This is why you ought to be for free trade. Because when you protect a country from what surrounds it, you render it less and less vigorously competitive and sooner or later you pay the penalty.

We live and always have lived with this. You have something or other and you look at it and say it's going to cannibalize our product. We say, "Hey—we're going to cannibalize our product ourselves, because if it can be done, somebody will do it for us."

Is intensive use of information technology making the U. S. more competitive?

You know, I have never seen a computer in a Japanese senior manager's office. Like many things, this is maybe larger than life in the description, but maybe there is an element of truth to [the idea] that when the information can get massaged through layers, the essential information gets altered, the essential information sometimes gets wiped out.

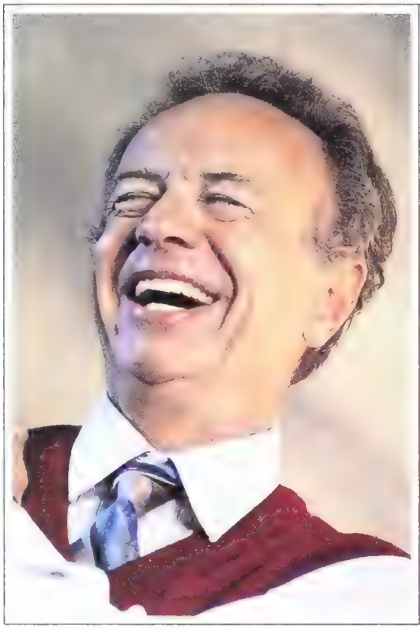
What is unarguable is the speed. It's much slower, and it makes the Japanese less competitive at this point. But I wouldn't count on their staying there. The Japanese can embrace new developments, and once they decide on it, they do it aggressively and effectively.

What, if anything, should the U.S. government do to bring forth an advanced information infrastructure?

If we deregulate telecommunications and encourage the conversion to digital stuff, it will speed up the process that has been going on.

What about providing equal access—to make sure we don't create information haves and have-nots?

In a society like ours, where nearly 10% of the population doesn't have health-care insurance, you're talking about availability of high-capacity networks? Come on. You know we have people sleeping on the streets, and you talk about high-capacity networks? I mean, if we are going to start talking about equal access, how about talking about food and residence and health care first? There isn't enough public money to fund equal availability of an expensive infrastructure.



You can retard technology, but the cost of retarding it is generally high

Point two. If we modify the goal and don't talk about equal access, but talk about broad access, as broad as possible, my belief is that the best way to get broad access is to have vital, competitive, aggressive industries—which, in the process of competing with each other, drive down the costs and therefore bring the goods or accessibility to a larger and larger number of people. That is what brought TV sets to people. That is what brought PCs to people.

These were unregulated industries that in the process of competing with each other, competing for new customers, brought the cost down and reached people at a phenomenal rate. I think that is a very good model. And the role of government ought to be to stimulate that rapid access and move from legacies of regulated monopolies to the model of the industries that brought that kind of access.

Do you see the massive tide of information technology transforming the society—say, the way the arrival of steam power did?

It's not on the scale of the steam engine. Before the steam engine, people were doing work with muscle and animal power. After the steam engine, the age of the craftsman came in, and society got reordered. This technology is not of that magnitude. A lot of companies have changed permanently and substantially in the way they operate as a result of it. But society at large has not qualitatively changed.

The best metaphor for it is as kind of a universal tool and tools over time do transform society. The electric motor is a better example than the steam engine. The electric motor came and came and came and ended up in your shaver and your toothbrush, but it sure as hell didn't start there. It crept in.

Immigration *is* a transforming experience. When you leave your old country and arrive in a new one, you've left and you arrive. Whereas in this new world that we are talking about, you can make a transformation a minute a day per month. Every month I live one more minute per day in this new world. You wind up leaving the old world with a gradual transition.

It still adds up to a big change—and not always a welcome one. You had expected to cut back your schedule by now, but you're busier than ever.

What we are talking about absolutely has a role in the pace. I tell you how I feel about it, but not everybody will feel that way. I am exhilarated by what I do, so I like not having to be separated from it by time and space. If I didn't like what I am doing, I would probably hate this stuff.

There are two types of Hungarian immigrants of my age: the people who were constantly bitching about America because they couldn't find the things they left behind in Hungary, and people who accepted what was available here as kind of a moral equivalent of what was left behind. Once you got into that mode, you kind of went with the flow and did quite well. The others were still bitching. "They don't have sidewalk cafes in New York." This is a little like that. □

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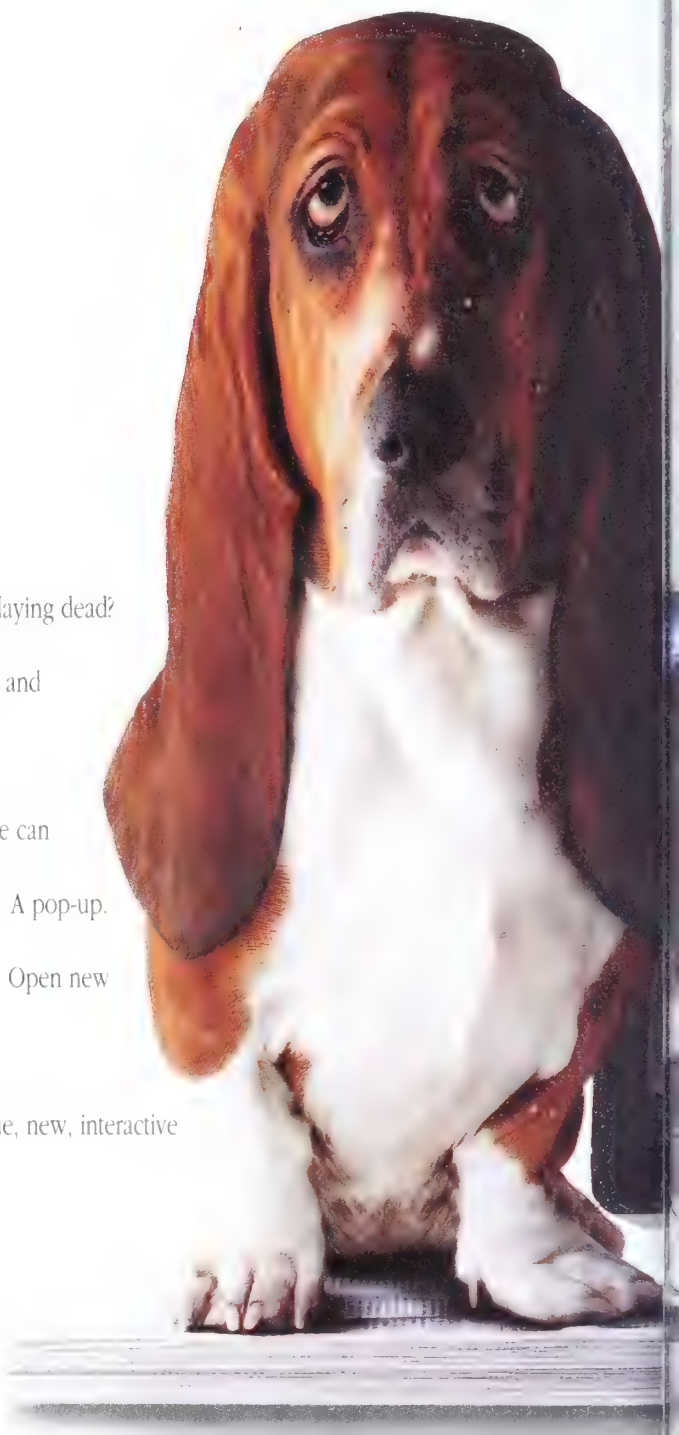
Old dogs, new tricks and s



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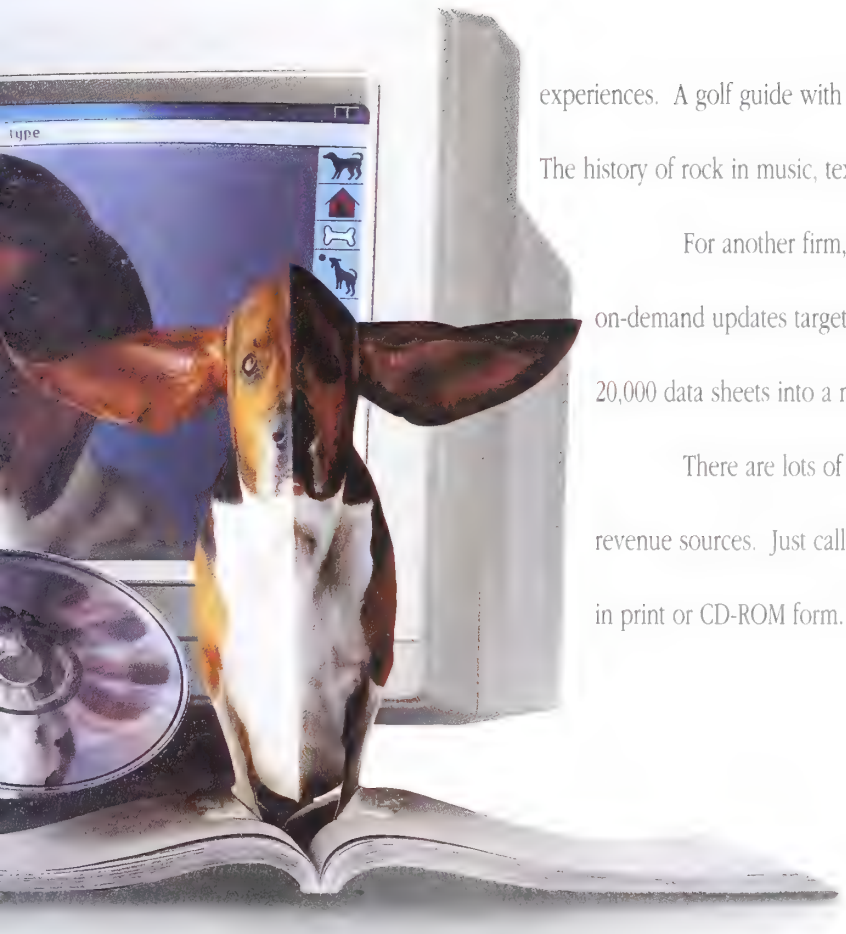
ing new revenue streams.



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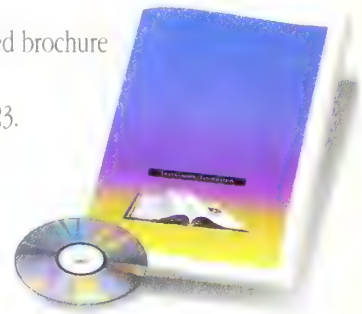

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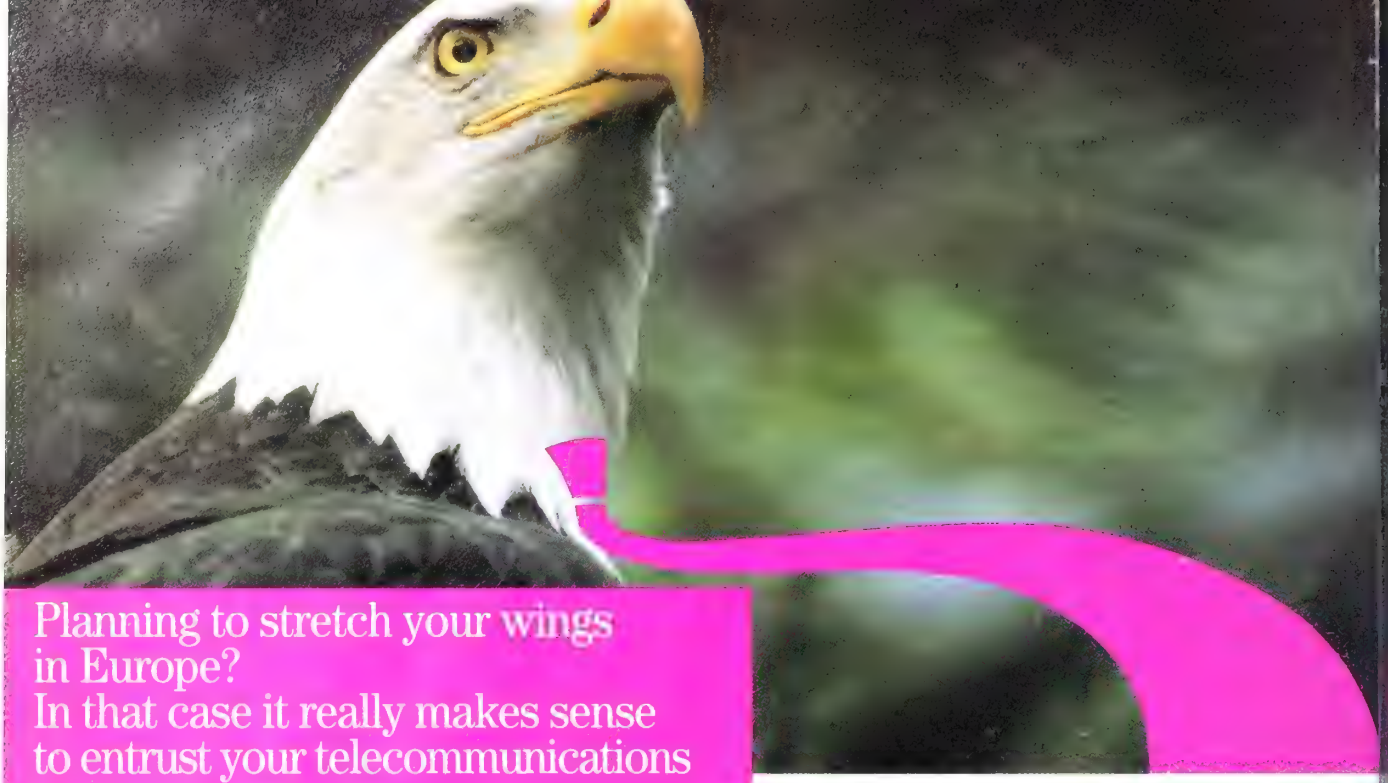
THE POWER TO TRANSFORM INFORMATION INTO OPPORTUNITIES



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We tie markets together.

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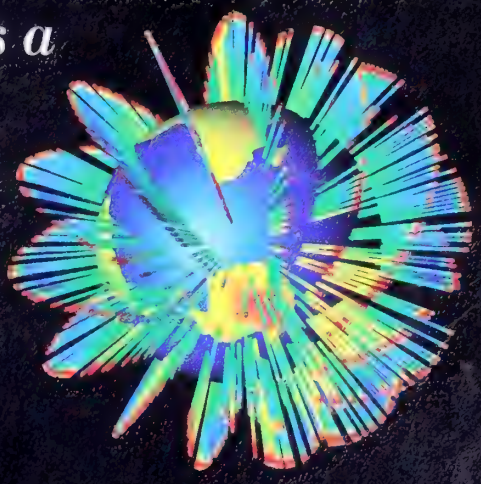
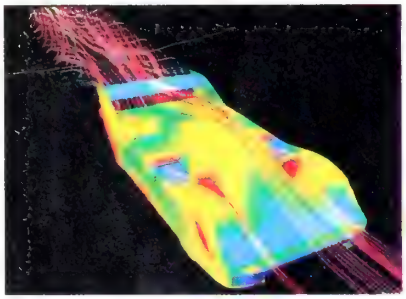
IMAGES FROM THE DIGITAL WORLD

More than just a number cruncher, the computer is a powerful visual tool that can transform reams of raw data into striking images. On these pages, BUSINESS WEEK *presents a portfolio of computer imagery from the worlds of technology, science, business, entertainment, and the arts.*



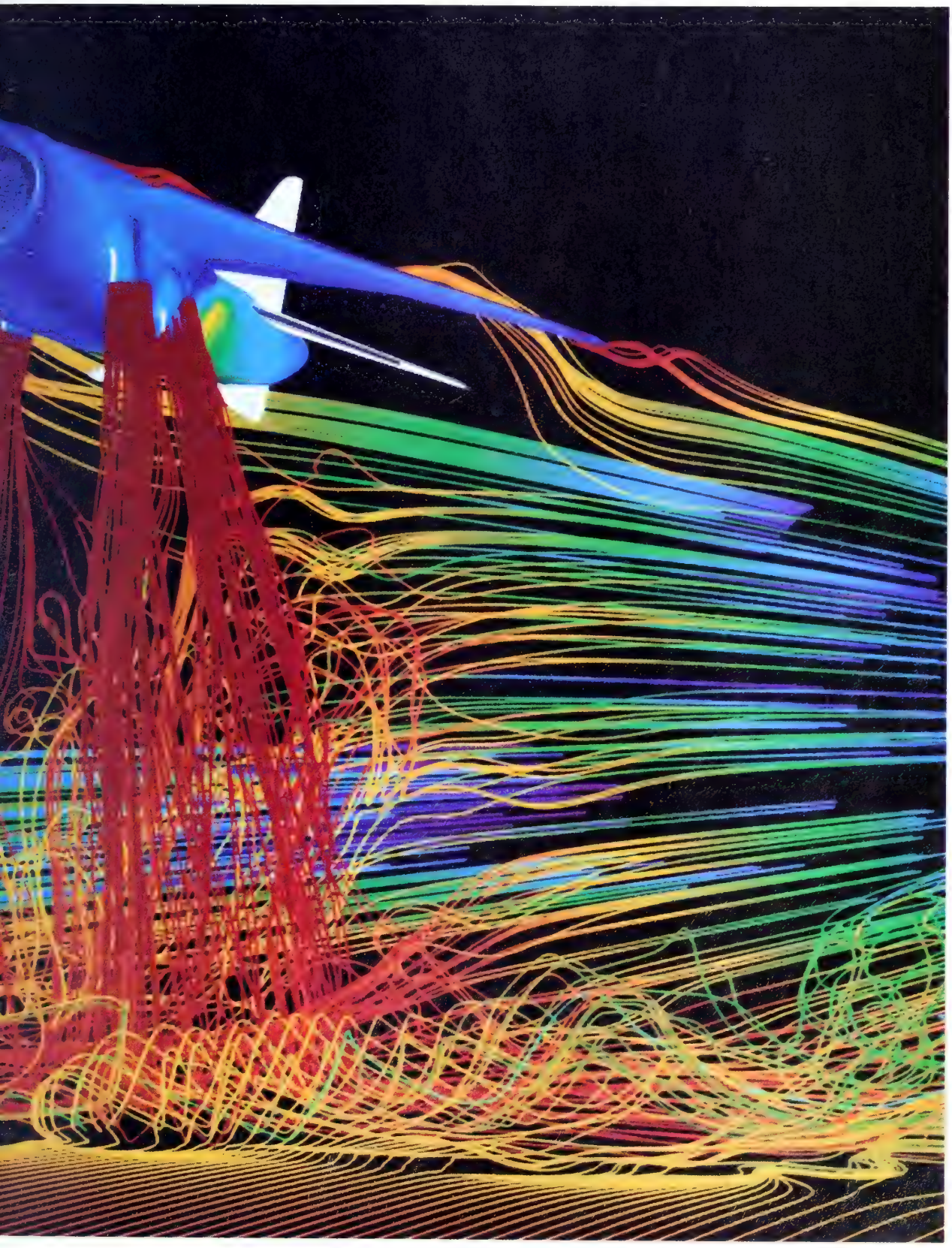
IBM CORPORATION

THE AIR UP THERE: *Computer simulation has proved a godsend to designers of commercial and military aircraft. At NASA's Ames Research Center in Moffett Field, Calif., scientists can use supercomputer-generated images to study the turbulence and exhaust patterns as a vertical-takeoff Harrier jump-jet lifts off the tarmac. The colored streamlines represent the paths of air particles in the exhaust, which is initially deflected downward, and the disturbance created as the fighter plane moves slowly forward.* ▶



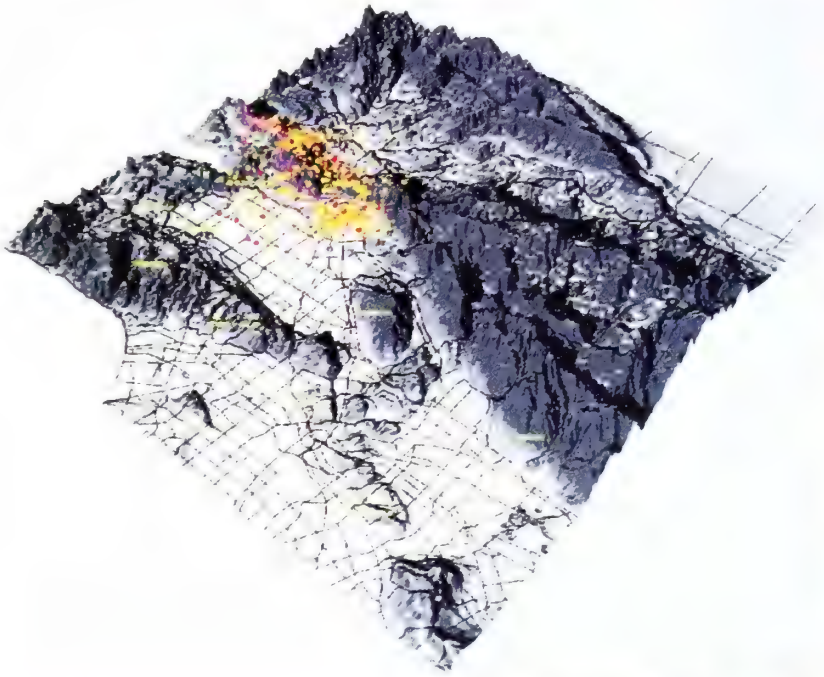
▲ **SPEED RACER:** *Similarly, the computer has aided car designers in making auto bodies ever more aerodynamic. Software designed by Analytical Methods Inc. creates a kind of electronic wind tunnel: This model shows the air flowing over a Porsche 956, with streamline colors representing different wind patterns. As changes in shape are contemplated, wind patterns shift over the body.*

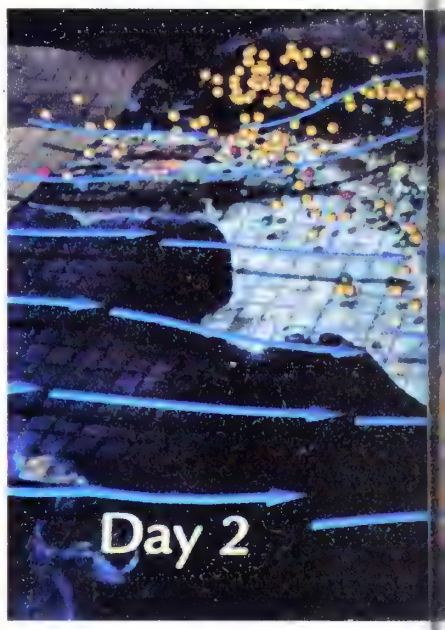
Technology

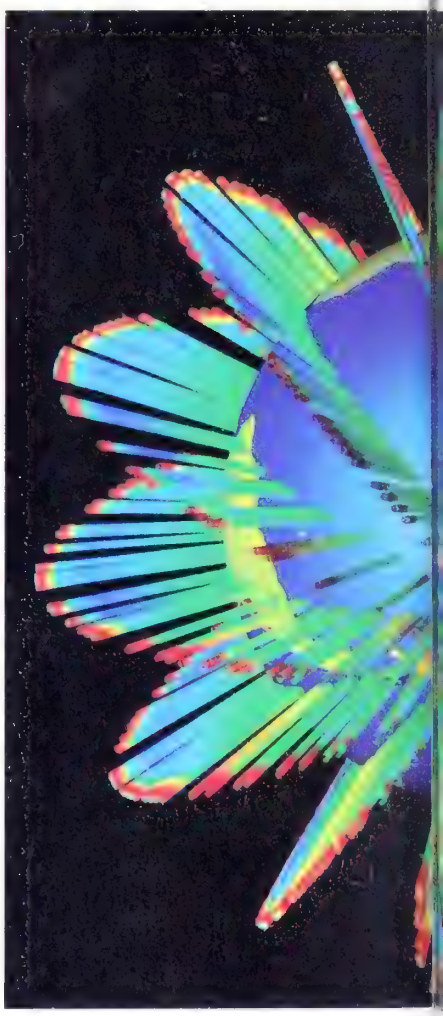


(LEFT TO RIGHT) ANALYTICAL METHODS; SILICON GRAPHICS INASA AMES RESEARCH CENTER

SHOCK TREATMENT: *After January's quake, scientists overlaid a U.S. Geological Survey digital topographical map of the L.A. basin (below) with seismic data from the California Institute of Technology to study aftershocks. Dot colors represent intensity, with pink-purple the biggest jolts. The model at right is also of interest to Angelenos: It's for smog. Generated by Carnegie Mellon researchers, it shows levels of carbon monoxide and other pollutants—and how they interact with topography, winds, and other meteorological effects.* ▼ ▶

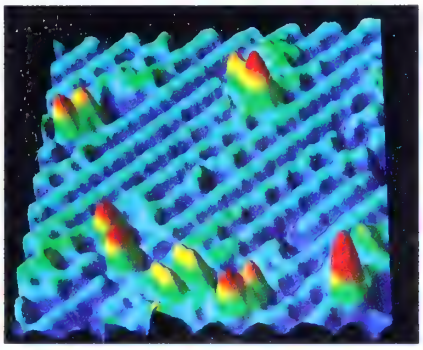




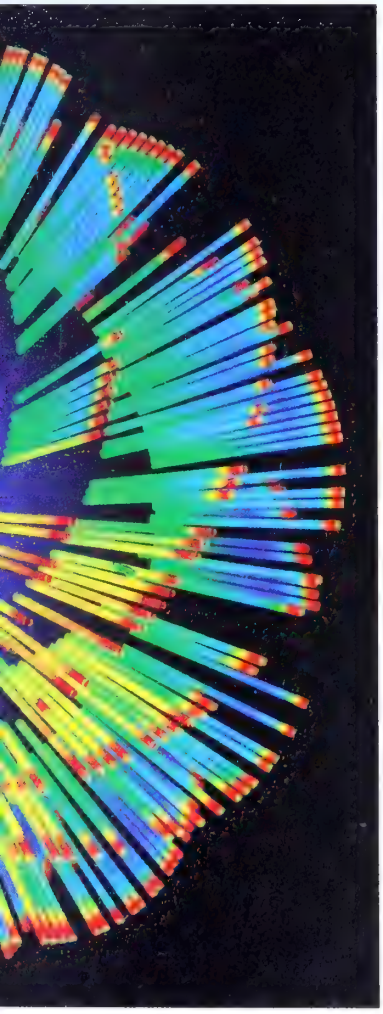


LOOK INTO YOUR HEART: *A 3-D model shows the pumping action of the muscle wall and the blood flow in a human heart. Oxygen-rich blood (red) enters the left ventricle (actually on the right, as one views the chest); low-oxygen blood fills the right. Recreating a single heartbeat takes a week's calculations on a Cray C90.* ▶

IMAGE FROM SUPERCOMPUTING APPLICATIONS/UNIVERSITY OF ILLINOIS. IBM CORPORATION (3). CHARLES S. PESKIN/DAVID M. MCQUEEN

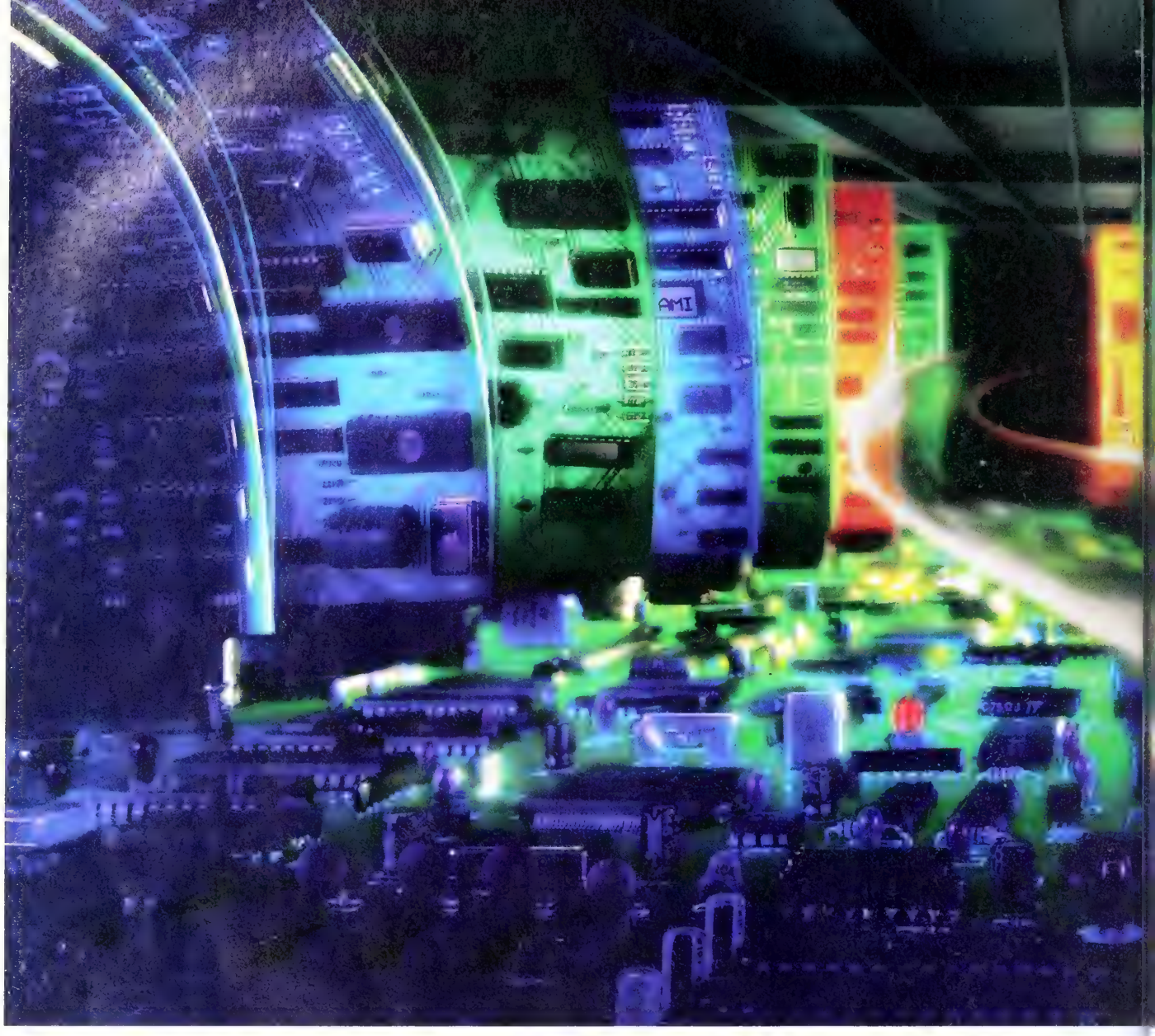


◀ SILICON VALLEYS: *The Lilliputian world of individual atoms is revealed in this striking view of the surface of a silicon crystal. Created with a "scanning tunneling microscope," the image distinguishes clusters of antimony atoms (the reddish peaks) from the ridges of silicon atoms.*



◀▲ ACCL-WEATHER: *Computers have been invaluable for analyzing and displaying atmospheric data. Developed by IBM scientists, the image on the left, viewed from over the South Pole, shows the density of the high-altitude ozone layer that protects the Earth. The bright red indicates the highest ozone level. The image above highlights the structure and dynamics of the Earth's atmosphere, displaying wind speeds and patterns in the spring over the Northern Hemisphere.*

Science



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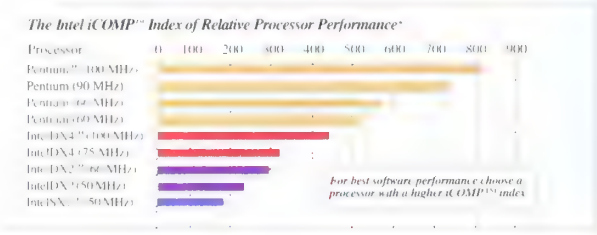
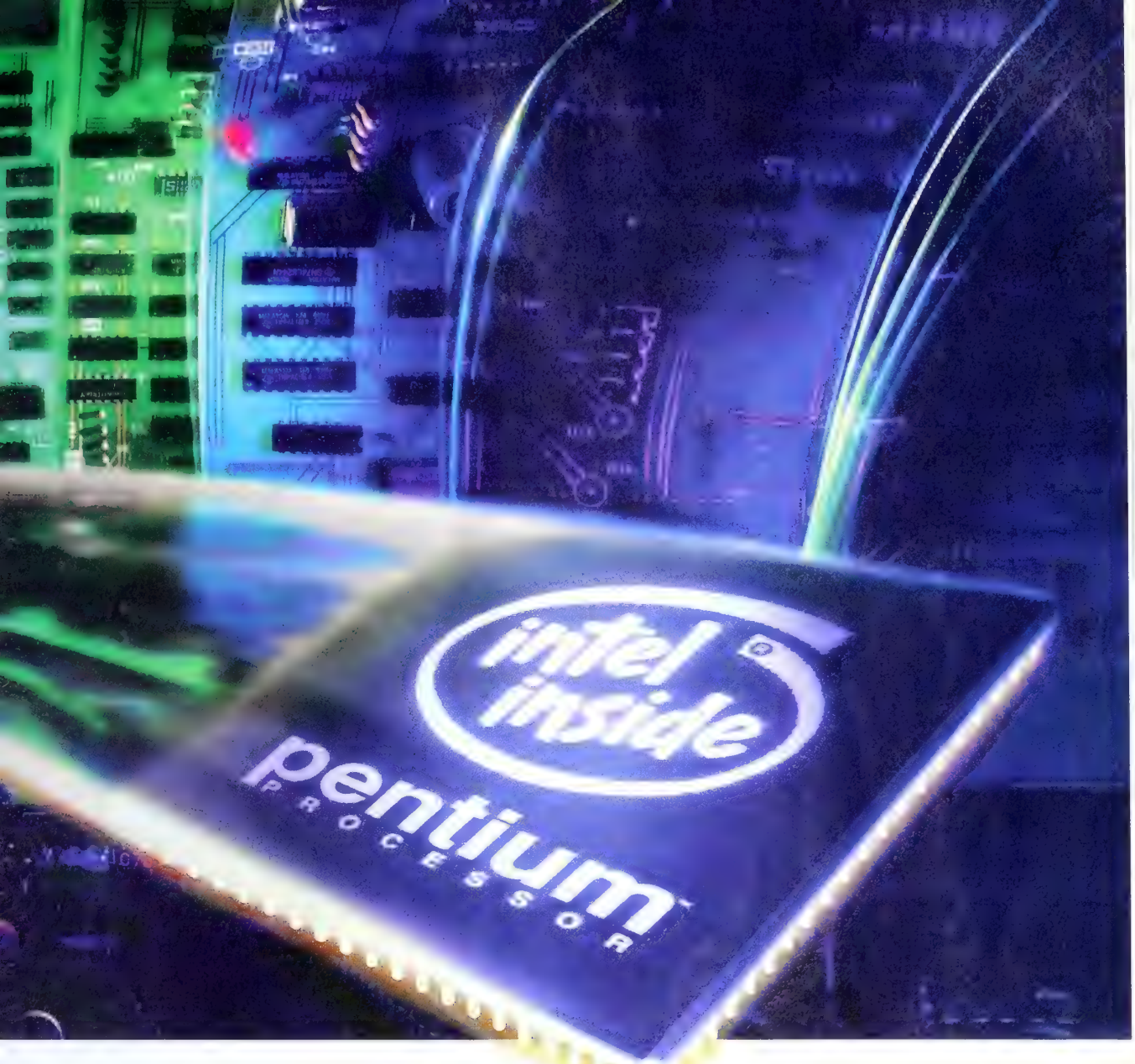


*Source: Intel iCOMP: A Simplified Measure of Relative Intel Microprocessor Performance. Intel Corp. 1992.

intel inside
pentium



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nts such as more RAM and larger hard drives, ny feature important design improvements like PCI local bus. That means they can handle the st innovative technologies, including applica- ns like Intel's new ProShare™ document and video nferencing software.

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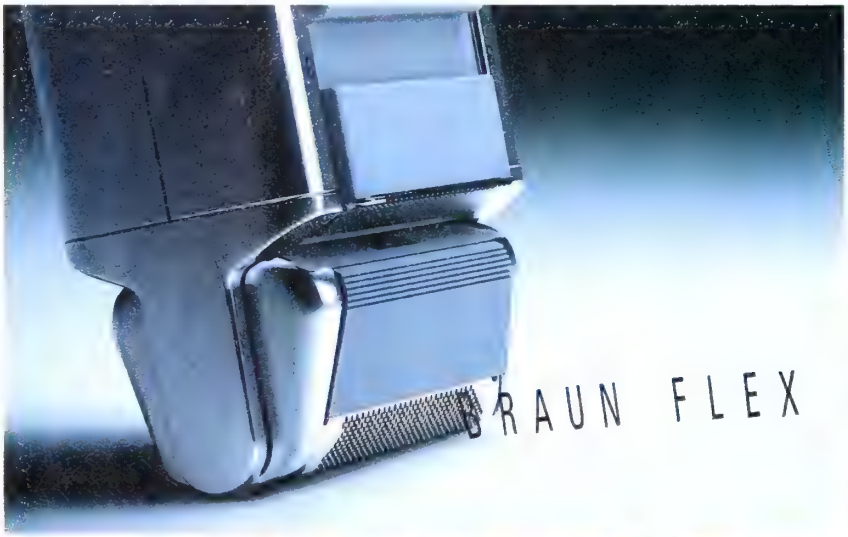
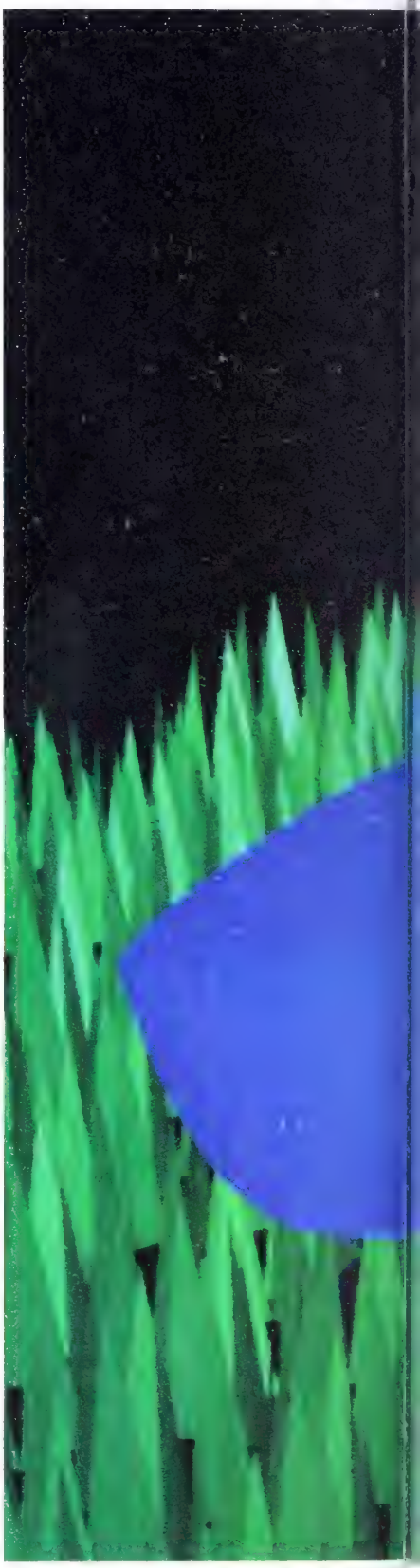
BRAINS AND BRAUN: *It's useless on a beard, but watch what it does to ad copy. This razor, completely computer-animated by Blue Sky Productions, convincingly mimicked the physical properties of metal, plastic, and whiskers in a prizewinning Braun ad.* ▼

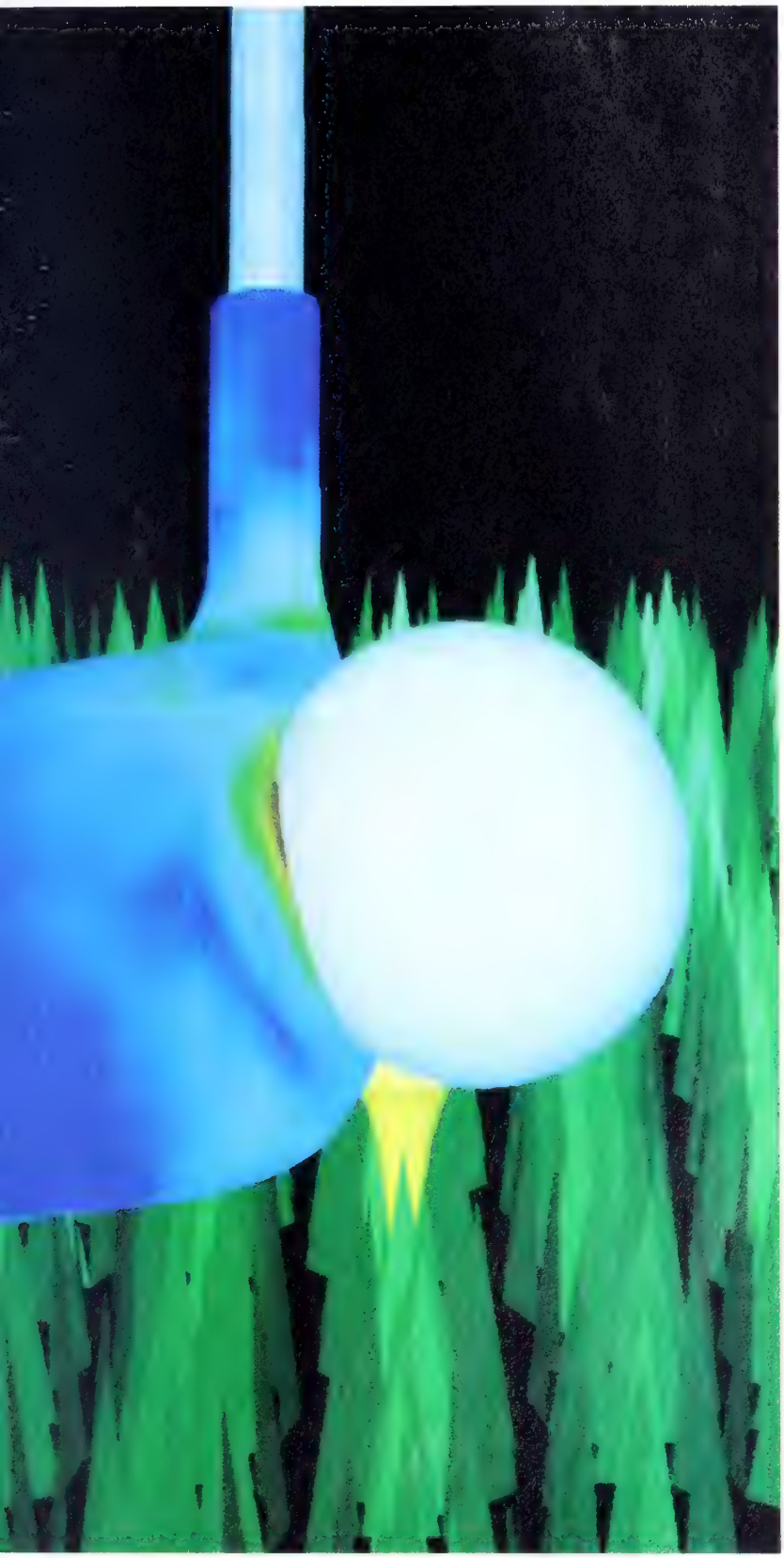
FOR SWINGERS ONLY: *For its new titanium-head club, MacGregor Golf Co. turned to a Cray Research 3-D supercomputer model that hits the ball, measures data, and makes adjustments. It told MacGregor that adding airfoils would yield the average duffer a 7-to-10-yard gain.* ▶



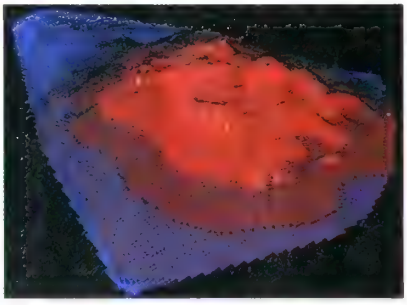
▲ FLORA AND FAUNA: *Combining inapposite images via computer is a real attention-getter—no wonder advertisers love it. This unlikely aquarium —the slogan with it is "IMAGINE"—was digitally composited by Charly Franklin Productions for a British Columbia Telephone/Cellular ad.*



Business



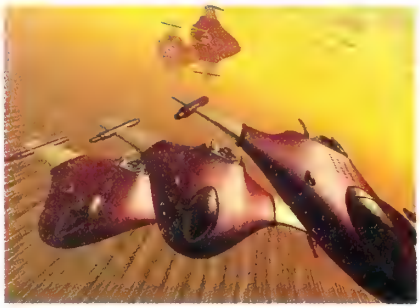
▲ **HIGHWAY PATROL:** *It's a traffic report for the '90s: a bird's-eye view of the flow on the Information Superhighway from the National Science Foundation's network. All clear on the purple lines; heavy backups on the white, where 100 billion bytes of data are moving.*

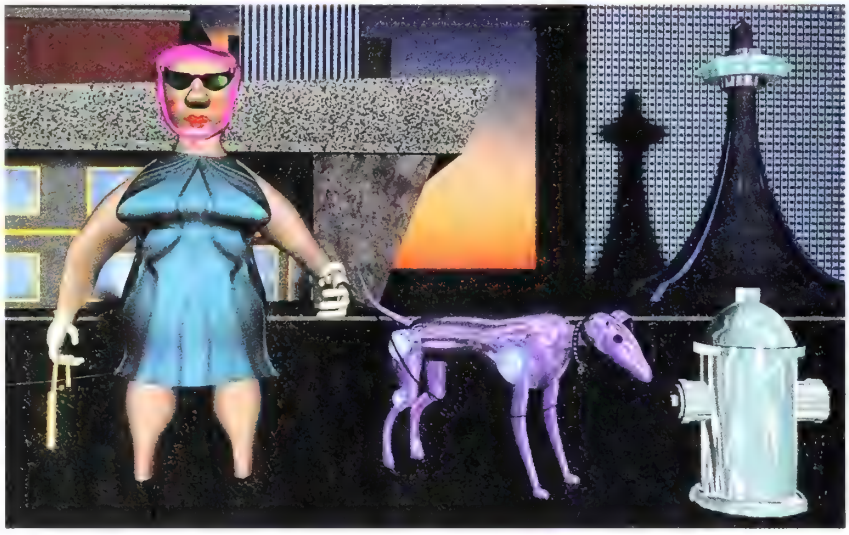


▲ **LOCATION, LOCATION:** *Let's see, where should we put that next Kmart? This computer map from ESRI in Redlands, Calif., shows the "supply accessibility surface" for Charlotte, N.C.—how easy it is for customers to get to the current discount stores (the white dots). A separate computer map depicts demand; combine them and you have a virtual marketing guide.*

[CLOCKWISE FROM TOP LEFT] COURTESY OF BLUE SKY PRODUCTIONS, INC. CRAY RESEARCH, INC. NATIONAL CENTER FOR SUPERCOMPUTING APPLICATIONS/UNIVERSITY OF ILLINOIS. ESRI. AD BY MCKIM BAKER LOVICK BEDDO OF VANCOUVER. ART DIRECTOR DAVID FENNANT & CHARLY FRANKLIN. PRODUCTIONS R. GREENBERG ASSOCIATES

FLIGHT OF FANCY: *Working only from a sketch of a new toy, computer animators at Gingko Design in San Francisco relied on proprietary software to come up with this proposed package design for "Galaxy Voyagers" spaceships from Lewis Galoob Toys.* ▶





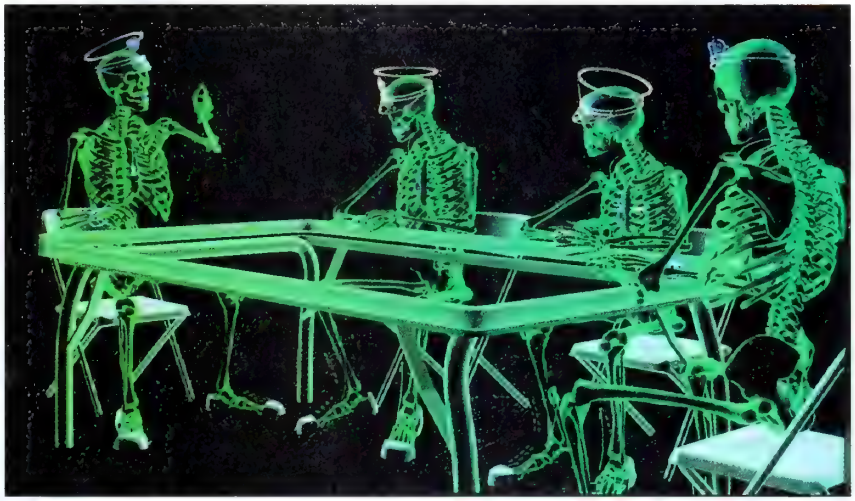
▲ **ROBO-PUP:** *Computer imaging lets artists' imaginations run wild, as in David Poole's Macintosh-generated* Walking the Dog. *He prefers 3-D, he says, because "you're able to create your own worlds and characters."*

MIRACLE ON 34TH STREET: *A photo is mapped onto 3-D software, the top of the image is twisted, a portion of sky is stretched, and presto—Leaning Tower. From a 1990 J. Walter Thompson ad.* ▶

[illegible] PHOTOGRAPH COURTESY OF ILM R/GA PRINT DAVID POOLE

◀ **'S WONDERFUL:** *Let's hear it for that great dance team, Paula Abdul and…Gene Kelly? Groucho, Cagney, and Bogie are among the other stars in Diet Coke's campaign blending new and archival footage.*

BONE VOYAGE: Toys *may have been a megaflop, but there was nothing but praise for Pacific Data Images' F/X, which utilized data on human movement to make this skeleton crew rattlingly real.* ▼



◀ **UNTAMED HEART:** *In New Line Cinema's upcoming* The Mask, *shy-guy Jim Carrey dons a magic mask that turns his impulses into reality. When he sees a gorgeous woman, his heart literally jumps out of his skin. It's a 3-D graphic, a "photorealistic" computer-generated effect developed at F/X pioneer Industrial Light & Magic, which has redefined the art since* Star Wars. *Such film-flam is changing more than the look of movies; as ILM spokesman Miles Perkins says, "it gives scriptwriters and directors the opportunity to do gags they could never do before."*

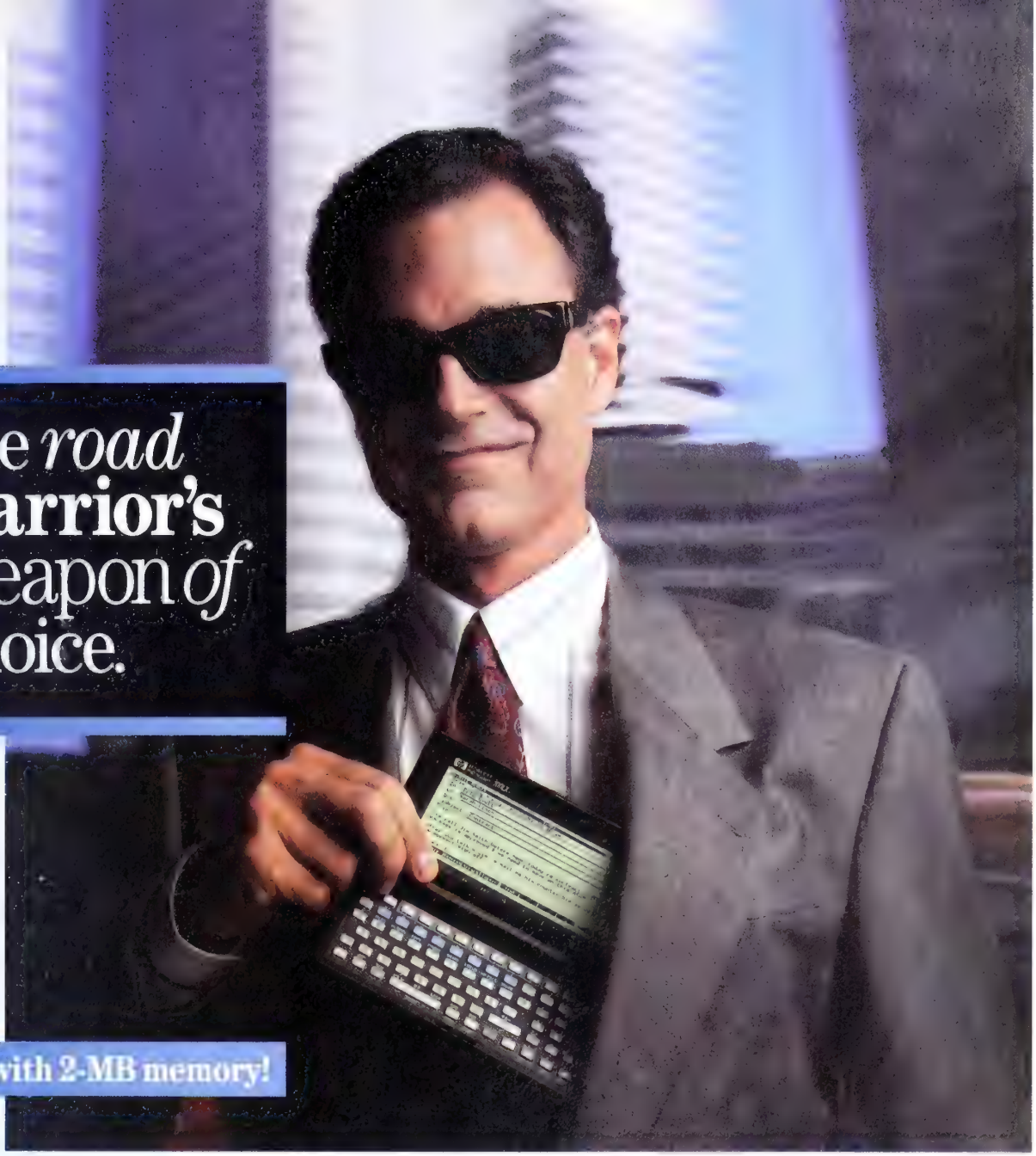
Entertainment

▲ **MORPHIN' ADDICT:** *The joys of "morphing," or combining two digital images in various permutations, as above, were once the exclusive domain of big-budget special-effects companies. Now they're available to anyone with a well-appointed desktop.*

▲ **HERE, KITTY:** *Artist/author Bill Niffenegger mixed photos with painted and computer-generated effects to produce this critter for an exhibit in Tokyo. The image, he says, "represents a call for all of us to be sensitive to the issue of supporting diversity of species on our planet."*

▲ **LIGHTNING STRIKES TWICE:** *Computer-altered composite photos also can have the unsettling effect of blending separate events into seeming concurrence. At Breakers Waterpark in Tucson, Peter Menzel took three shots from the same point at different times of day. They were combined by digital illustrator ("pixelographer") Dan Mills, who says: "The trick is just to make it look real." No small trick.*

The Arts



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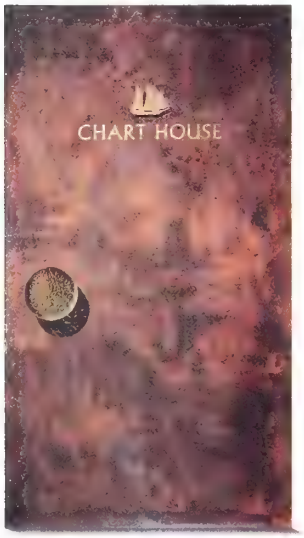
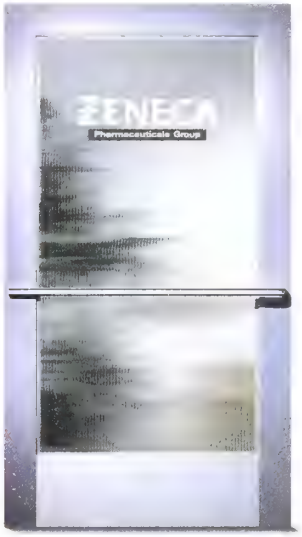
Since Lante Corporation created a sales toolbox using Microsoft Office and Visual Basic , sales have increased 128%.

Wonderware Corp. created a Microsoft Windows®-based control system at one-fourth the cost of a typical configuration.

Gateway Group, Inc helped integrate Microsoft SQL Server into an image-based billing system, dramatically improving productivity.

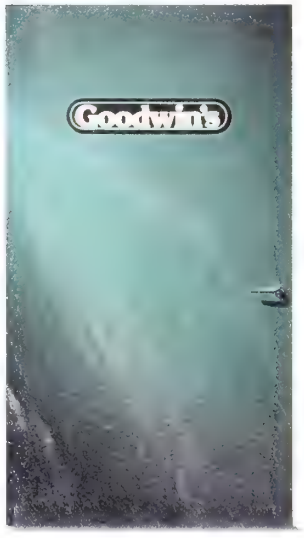


Microsoft Office and WinResources Computing, Inc. made changing menus faster and easier for this popular restaurant chain.



MDL Information Systems, Inc. and Microsoft Office provided productivity tools allowing research scientists to better analyze data.

This securities firm looked to Micro Modeling Associates and Microsoft Office to expedite the delivery of investment research to clients.



MTX International, Inc. and Stanford Business Systems joined this supermarket's accounting and point of sale system with Microsoft Access.

Platinum Software and Paradigm Technologies implemented a Windows NT®-based client/server architecture, cutting costs 65%.

This law firm now spends less time on paperwork thanks to Quickstart Technologies' use of Microsoft Office and the Windows NT family.

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How technology creates winners and losers at work

THE NEW

CE OF BUSINESS

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THE GREAT EQUALIZER
Ever-cheaper information is a boon to big business, of course. But the little guys also will reap many of the benefits—and it may cost all businesses less than they expect

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One way to reinvent government is to computerize the mammoth federal agencies. But despite successes, Washington is still a long way off from a digital revolution

ROOM WITH A VIEW: GTE'S NETWORK OPERATION CENTER

THE GREAT EQUALIZER

Information power is getting cheaper—and not only big business will benefit

BY IRA SAGER

When a truck rolls into the maintenance bay at Ryder System Inc.'s New Brunswick (N. J.) facility, all Karen Reinecke has to do is push a button to learn instantly what's ailing the vehicle. Reinecke, a technician for the $4.2 billion transportation giant, simply touches the probe on the end of her handheld computer to a tiny coin-shaped disk on the truck's cab that has been gathering information on engine performance and fuel consumption from electronic sensors under the hood. Gone is the guesswork—wrong 50% of the time—in finding engine problems. And with the sources of trouble more quickly identified, a truck's downtime can often be cut in half.

Information Age meets Road Warrior. Launched in mid-March, Ryder's Fast Track Maintenance Service will capture every bit—and byte—of information on its trucks electronically. And thanks to all the new data, scheduling the com-

ny's 8,500 technicians and 162,000 cks will be simpler, inventory tracking d parts ordering more efficient, and orts to fleet customers far more de- ed. Better yet, Ryder will be able to e information it collects on engine- t wear to negotiate longer warranties m suppliers.

Chief Information Officer Dennis M. nger figures the $33 mil- n investment in new nputer systems will pay itself in two years. nce we have that data- e of not only how to fix truck, but of failures, can predict which com- nents act best in what plications—whether it's the road or running und town supplying rger King," he says.

Ryder's transformation is one small part of a qui- revolution in the way siness is viewing and us- information. After years big investments in tech- ogy to automate such ks as order entry or bill- , companies around the rld are suddenly scruti- ing the information se systems capture to d easier and more effi- nt ways for their em- yees, customers, and pliers to do business. e reason: Competitive ssure is pushing compa- s to downsize even as y improve both the ds they make and the vice they provide.

Forced to do more with s, corporate giants such IBM and AT&T are scur- ng to reengineer their sinesses by rethinking rk flows and encourag- information sharing ong once-autonomous fdoms such as purchas- , manufacturing, and rketing. But it's not just e big boys. Smaller companies and self-employed are discovering that ent price drops and performance ad- nces in PCs, wireless communications, d business software have given them eap, potent weapons to compete mely against big, deep-pocketed ri- s (page 108).

Employees, too, are being buffeted by the Information Revolution. As businesses depend more on collecting, analyzing, and sharing information across their operations, they're demanding new worker skills for the Digital Age (page 112). A recent survey by compensation consultants N. E. Fried & Associates found that at least half the secretaries at most of 478 U. S. companies used basic spreadsheet software. And factory workers at world-class manufacturers such as Motorola Inc. must have the math and basic computer skills to run computer-programmed machinery or use statistical process controls to monitor quality on the production line. "The companies that do not provide information on an accessible basis to those that need it will be disadvantaged," says Robert M. Howe, a former Booz Allen & Hamilton Inc. consultant who since 1991 has run IBM's fledgling consulting business.

Luckily, a new generation of cheap computers and advances in software and networks allow U. S. business to ferret out information it couldn't afford to find in the past. Andersen Corp., for example, can manufacture windows to order because it installed PCs in stores to let customers configure, price, and order their own windows. And emerging technologies such as digital image processing and object-oriented software, which allow programs to be written in easy-to-reuse blocks, will let companies capture information without the cumbersome and costly process of translating it into arcane computer language. "All of a sudden," says AT&T CIO Ron J. Ponder, "it doesn't cost as much to have this technology."

That's why many companies are finding it's never too late to automate. With almost daily advances in computers, software, and networks, the cost of computing power is dropping roughly 30% every 12 months. Some companies that are only starting to go digital with networks of PCs or fast workstations find their processing costs actually lower than those of competitors who took the plunge in the early 1980s, when costly mainframes ruled the earth. In fact, USAir says it will get a leg up on competitors—and may spend half the amount rivals American Airlines and United Airlines pumped into their mainframe computer systems. The reason: It's using hundreds of workstations to tear through critical ticketing information overnight—which some competitors take a couple of days to crunch.

Getting information faster and more accurately can dramatically alter the rules. Look at how the relationship between suppliers and customers has

How the Information Age Is Changing Business

The advance of digital technology is having a dramatic impact on businesses, their workers, and the suppliers and customers who trade with them. Here's how:

ORGANIZATION New electronic systems are breaking down old corporate barriers, allowing critical information to be shared instantly across functional departments or product groups—and even with workers on the factory floor.

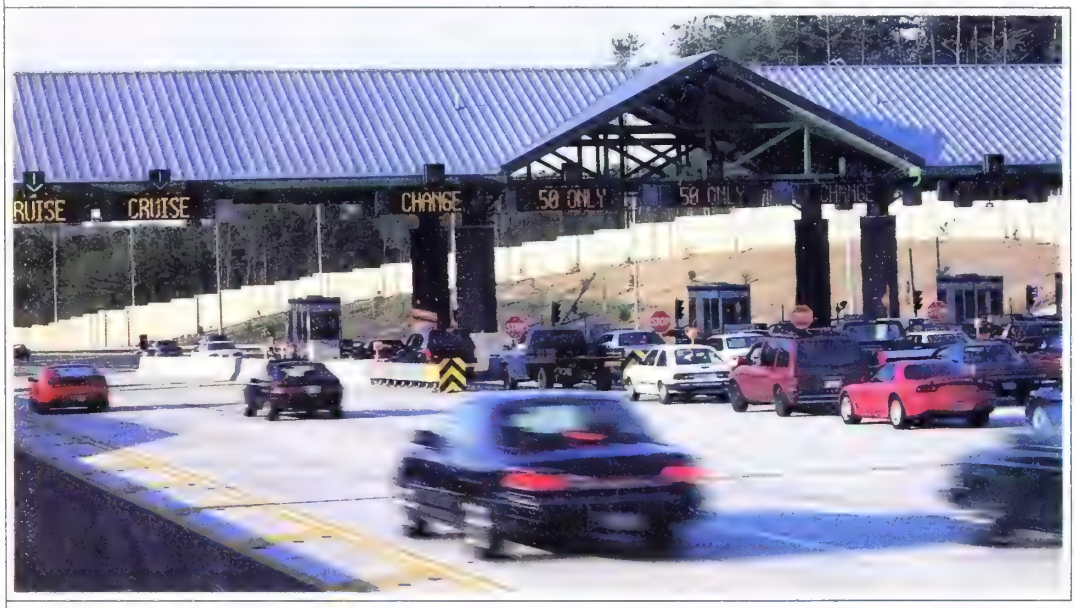
OPERATIONS Manufacturers are using information technology to shrink cycle times, reduce defects, and cut waste. Likewise, service firms are using electronic data interchange to streamline ordering and communication with suppliers and customers.

STAFFING New systems and processes have eliminated management layers and cut employment levels. Meanwhile, companies are using less costly computers and communication devices to create "virtual offices" from workers in far-flung locations.

NEW PRODUCTS The information "feedback loop" is collapsing development cycles. Companies are electronically feeding customer and marketing comments to product-development teams so that they can rejuvenate product lines and target specific consumers.

CUSTOMER RELATIONS No longer simply an "order entry" job, customer-service representatives are tapping into companywide databases to solve callers' demands instantly, from simple changes of address to billing adjustments.

changed for retailers. In the 1970s, U. S. merchants started to replace clunky cash registers with electronic point-of-sale terminals that made tabulating receipts easier. But it wasn't until the 1980s, when scanners and bar codes became de rigueur, that retailers fully appreciated the wealth of information they have on their customers—everything from how often they use credit cards to what color socks sell best on Friday night.



TOKEN EFFORT: ELECTRONIC TOLLBOOTHS IN GEORGIA

Now, instead of taking product deliveries when vendors dictate, merchants such as Wal-Mart Stores Inc. increasingly are telling manufacturers what they want and exactly when and where they need it. Meanwhile, savvy suppliers are tapping this information to fine-tune their own production schedules according to what consumers are buying. "Point-of-sale [technology] changed the balance of power between retailers and consumer goods manufacturers," says Gerald Loev, former CIO of Prudential Insurance Co. and now head of a consulting service for Computer Sciences Corp.'s Index unit. Adds Deloitte & Touche Managing Director William Atkins: "If you're the vendor, you're at the [wrong] end of the chain."

Retailing is by no means the only industry in the midst of this info-tech revolution. Whether it's IBM giving salespeople once closely guarded data on product costs so that they can quickly respond to customer bids or Ryder's digitized garage, companies in almost every industry are keen to gain competitive advantage by employing digital technologies to manipulate information. "The more you know about your consumers, the more you're able to predict what they want, and the more you're able to deliver products that the customers want to buy," says John W. Harper, chief financial officer for USAir Inc. "In some cases, you can even create demand if you have the right information." That way, USAir can "micro-analyze" data on the 160,000 people it carries each day to find the best fare and schedule to fill its Friday afternoon flight from Pittsburgh to Harrisburg.

Something as simple as sharing an idea can pit technology against human nature

Above all, the companies most adept at exploiting technology to mine data are seeking something basic: to please customers. In fact, a recent Computer Sciences survey of information system managers at U. S. and European corporations found that customer service is the No. 1 focus of their companies' investments in technology. Ryder's Klinger says the new technology his company is using is the only way it can boost its customer satisfaction rating to 95%, from the current 88%, by the end of 1995.

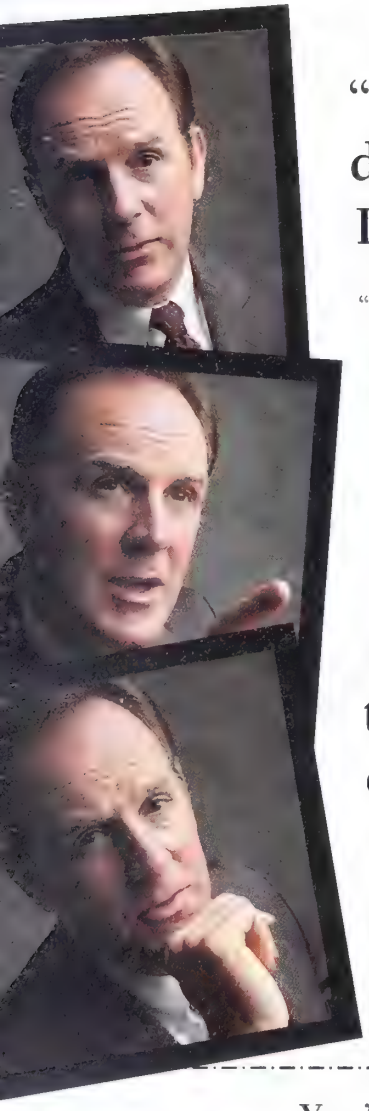
Edward L. Schrenk, senior vice-president at United Services Automobile Assn. (USAA) in San Antonio, goes further. He credits much of the insurance and financial services company's success to its commitment to technology. In just 15 years, USAA has mushroomed to the nation's fifth-largest private auto insurer and fourth-biggest provider of homeowners' coverage, with $18.5 billion in assets.

Since 1969, USAA has spent $130 million on computer and imaging technologies to boost customer service and lower costs. Today, it boasts an information system so advanced that it can track minute details, such as which auto parts are getting fixed most often. Why bother? USAA passes that data to parts suppliers who then make those parts if there is a chance for improvement or if they can make them more cheaply. The Big Three also get data from USAA to improve their parts.

Likewise, USAA had been trying for a long time to get glass shops to repair windows that had punctures outside the driver's field of vision, but no cracks. But shops would rather pocket the $275 to replace an entire windshield than charge $35 to repair it. So even though USAA offered to waive the deductible if customers would fix the glass, body shop owners were convincing drivers to replace the whole thing. Only when USAA started capturing data and publishing the repair record of various shops in its newsletter did this start to abate. The shops realized where they stood relative to the competition and didn't want to lose USAA's referrals. The percentage of repairs zoomed to 28% from 5% in just four years.

To be sure, not all companies have been as successful in making huge investments in technology pay off. The problem, consultants say, has been the traditional view of technology as a tool simply to cut costs and support already-

"I finally found a company who backs up their dedicated lines with dedicated people."



"I knew I could choose my long distance carrier. I didn't know I could choose my local carrier, too."

"It's nice to have an option in local private line service. Especially when that option is Teleport Communications Group (TCG). They're the ones who deliver."

"Fast installation, 99.99% availability, customer service in minutes instead of hours or days, and people who treat me like I'm special. What more could I ask?"

"Every way you measure private line performance, TCG measures up. And after years of settling for what I could get, I'm finally getting what I want. Why didn't I think of this sooner?"

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existing operations. In the early 1980s, companies such as General Motors Corp. were convinced that huge investment in robotics to automate manufacturing plants would boost productivity. It didn't. "In the past, the technology was seen as a peripheral vehicle for implementing the strategy," says Joe Carter, managing director of Andersen Consulting's new technology center in Palo Alto, Calif. "Today, technology is the strategy."

In fact, much of the action in corporate information systems now involves capturing data on customers. "We have to have an end-to-end [direct] relationship with our customers," says AT&T's Ponder, who was recruited by the telecom giant less than a year ago to help link corporate goals with AT&T's massive technology investments.

For a $67 billion behemoth like AT&T, understanding customer needs is critical. Ponder argues that large companies will find that future opportunities for growth will be in smaller markets or niches, with customers they already have. "You can't win anymore by selling 10 million of a product," he says.

The real breakthroughs will come from the ability to "mine" information—the process of quickly gathering and analyzing the millions of bits of data that a business generates each day—and steer various pieces to the right people within the organization. "Power used to be that you controlled the information," says IBM's Howe. "Now, power comes from providing greater access to the information."

But first, companies have to know their customers in even more detail. Dell Computer Corp. CIO Thomas L. Thomas says new computer systems he is installing will make Dell the "Nielsen" of the computer business. By using new systems to track customers' detailed buying habits, Dell hopes one day to be able to anticipate their needs and call them with just the product they're most likely to buy—say, more memory or new software.

Dell is also investing heavily in a global information system that will, among other things, enable a registered repairperson in any country to pull up data on any Dell PC—in his or her native tongue. That does away with the need to print manuals in many different languages. Over time, Dell even plans to give its more sophisticated customers access to this information system—allowing Dell to reserve more expensive human hand-holding for less savvy customers. Starting this year, some customers will be able to order additional PCs and receive shipment without ever talking to a salesperson. Later, they will be able to pull up technical information to diagnose and fix problems on their own, rather than tapping Dell's service desk.

Indeed, customer service is one of technology investment's hottest areas. Good customer-service systems can cut field-service costs, improve relationships with existing customers, and eventually generate new sales. GTE Corp. customers used to get bounced around until they found the right department or person to send out a repairperson or process an order. That's because operators could do little more than take down basic information and pass the caller along. "It proved to be not very good customer service, but also very expensive to us," says Lanny Russell, a vice-president of GTE's telephone operations.

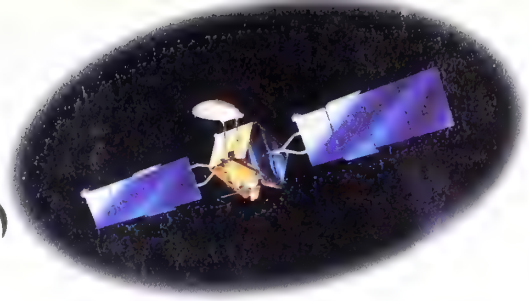
GTE decided that the best way to service its customers was to offer "one-touch" service—from the same operators who used to pass the call. That led the company to start developing a new system in 1992 to give operators access to several corporate databases quickly, allowing it instantly to send out a repair truck or even test the line electronically. In pilot tests, operators now solve problems with one call 35% of the time—compared with one in 200 just over a year ago. "We'll be able to provide better service in three years than we can today—and we'll be able to do it with much lower employee counts," predicts Russell.

Increasingly, companies are leveraging their existing information expertise into new businesses and markets. Dallas-based Amtech Corp. is a $60 million company doing a thriving business supplying railroad companies with computerized systems that track exactly where railcars—and goods—are, anywhere in the nation. The company is using the same radio-frequency technology to branch into automated toll-collection systems to help state and local government reduce delays at toll plazas. With Amtech's system, commuters use a

INFORMATION PRIORITIES HAVE CHANGED RAPIDLY

NORTH AMERICAN RANK 1989	NORTH AMERICAN RANK 1994	TOP ISSUES	EUROPEAN RANK 1989	EUROPEAN RANK 1994
11	1	Reengineering processes through information technology	17	1
2	2	Aligning information services and corporate goals	3	3
6	3	Organizing and utilizing data	7	5
7	4	Instituting cross-functional systems	5	4
5	5	Setting up information-system infrastructure	8	7
13	6	Improving the systems-development process	10	6
NR	7	Updating obsolete systems	NR	12
12	8	Integrating systems	14	13
8	9	Improving information-services personnel	4	8
NR	10	Changing technology systems	NR	14
4	11	Developing an information-services strategy	2	17
14	12	Cutting information-services costs	16	2

SOURCE: COMPUTER SCIENCES CORP., CAMBRIDGE, MASS., BASED ON 782 SURVEY RESPONSES FROM SENIOR INFORMATION SYSTEMS EXECUTIVES
NR: Not ranked



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For some companies, the only way to avoid falling behind competitors is to build organizations and systems that can adapt quickly to marketplace changes. At Texas Instruments Inc., the motto is "Change faster than change," says CIO J. R. "Bob" McLendon. TI, which spends more than 4% of revenues on information technology, has long been a leader in the use of technology—it has had a sophisticated e-mail system for 15 years, for example.

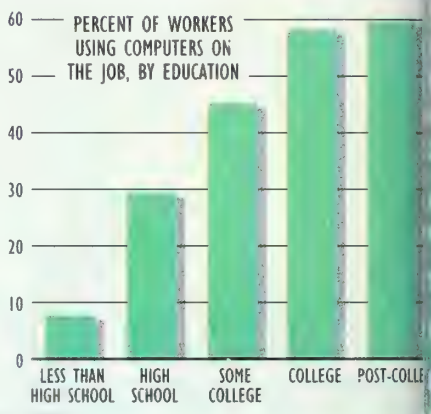
Now, McLendon is using that expertise to build what he calls "the virtual factory," a system to let TI build any product any time at any of its factories worldwide—with all the engineering specs and invoices moving electronically. Already, TI's product designers can transmit designs and equipment setup instructions to automated manufacturing sites globally. For example, TI keeps its big million-dollar chip testers in the Philippines, but they're controlled by test engineers in Houston. While TI still has a way to go, McLendon boasts that the semiconductor group reduced cycle time from order to delivery an astounding 39% last year—largely by linking its

HOW TECHNOLOGY TRANSFORMS WORK

Innovation and technological change create winners and losers. Wal-Mart rises and Sears falls. Microsoft triumphs and IBM slumps. The same is true for labor: Some workers suffer job losses, while others get paid to ride the high-tech revolution. Right now, the squeeze on jobs is most obvious and worrisome. But over the past 200 years or so, there has been no long-term trend toward higher unemployment because of investment in new machines and technology.

SKILL AND EDUCATION

Over the past two decades, the Information Revolution has been leaving the less skilled and less educated worker behind. But it has been a boon for those with at least some college education.



DATA: ALAN B. KRUEGER OF PRINCETON UNIVERSITY

REENGINEERING THE WORKPLACE

Service sector productivity is picking up smartly. One reason: High tech has taken root in service industries.

WORKERS USING COMPUTERS ON THE JOB, BY INDUSTRY

Finance, insurance, and real estate	71%
Public administration	62%
Transportation, communication, and other public utilities	40%
Services	39%
Manufacturing	36%
Mining	31%
Wholesale and retail trade	28%
Construction	13%

DATA: CENSUS BUREAU, 1989

FUTURE RETURNS

With technological leadership in U.S. hands, high-tech producers pay workers well.

AVERAGE WEEKLY WAGE FOR PRODUCTION WORKERS IN 1993

High-technology manufacturing industries*	$565.75
All other manufacturing industries	$474.21

*DRAWN FROM 12 INDUSTRIAL GROUPS, INCLUDING INDUSTRIAL INORGANIC CHEMICALS, DRUGS, ENGINES AND TURBINES, COMPUTERS AND OFFICE EQUIPMENT, COMMUNICATIONS EQUIPMENT, ETC.

DATA: BUREAU OF LABOR STATISTICS

mputers into one global network. nitored from a space-age control cen- near Dallas, TI can reengineer pro- ses on the fly—though the chips may ordered in Japan, developed in Tex- and made in the Philippines.

f concepts such as the virtual facto- or the virtual office are going to take however, companies will have to nge their corporate cultures in addi- n to adding new digital technology.

As companies break down the barriers between departments and their customers, "sharing information becomes really critical to any organization's success," says Thomas H. Davenport Jr., a consultant with Ernst & Young.

The problem, Davenport argues, is that many companies spend big on technology to allow employees to share information, but forget that sharing ideas is an "unnatural act" in corporate cultures that reward individual achievement. "If we really cared about information sharing, we would start to evaluate people by how well they share," says Davenport. With the amount of information that flies around organizations growing daily, focusing on information sharing—instead of just information technology—may be the next revolution.

With Peter Burrows in Dallas and bureau reports

nological change and office automation will k these jobs...

NT EMPLOYMENT CHANGE, 1992-2005

mputer operators	-39%
ling, posting, and calculating chine operators	-29%
lephone operators	-28%
pists and word processors	-16%
nk tellers	-4%

DATA: BUREAU OF LABOR STATISTICS

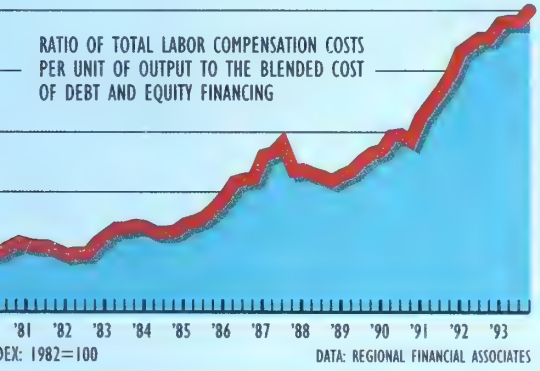
...but technology also generates new openings in the info-tech world.

FIVE FASTEST-GROWING OCCUPATIONS REQUIRING A COLLEGE DEGREE, 1992-2005

Computer engineers and scientists	112%
Systems analysts	110%
Physical therapists	88%
Special education teachers	74%
Operations research analysts	61%

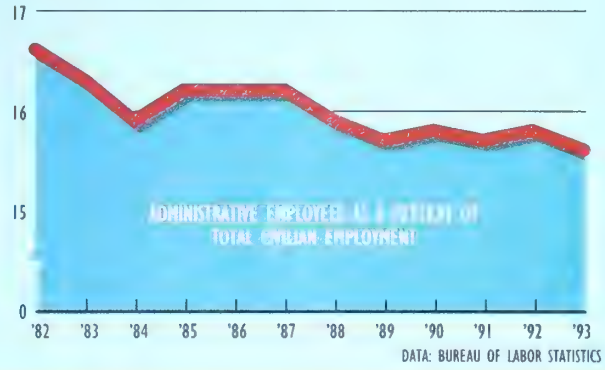
DATA: BUREAU OF LABOR STATISTICS

ess investment is skyrocketing as the cost of labor ore than tripled compared with the cost of capital.



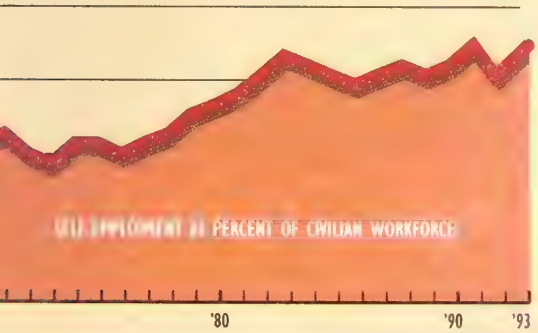
DATA: REGIONAL FINANCIAL ASSOCIATES

Companies are doing more with less. Classic white-collar workers are being replaced by high-tech machines.



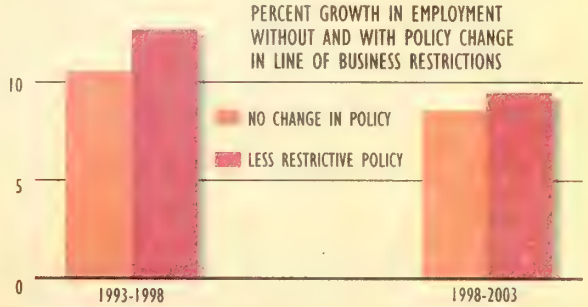
DATA: BUREAU OF LABOR STATISTICS

ur own boss. Computers linked to the Superhigh- could open up new opportunities for entrepreneurs.



DATA: BUREAU OF LABOR STATISTICS

But the impact of the Superhighway on jobs depends on government policy. Look at the effect of permitting the Baby Bells into new business.



DATA: WEFA GROUP

GIANT KILLERS ON THE LOOSE

Armed with high-tech information tools, small fry are seizing the edge from bigger companies

BY PETER BURROWS

REINVENTING THE WHEEL: CANNONDALE RESEARCH DIRECTOR DICK RESCH

When basketball player-cum-rapper-cum-movie star Shaquille O'Neal wants to ride a bicycle, endorsement-hungry bikemakers want to make him happy. But satisfying the Shaq's 7-foot-1-inch, 301-pound frame requires lots of custom work, including reinforced tubes, wheels usually used for tandem bikes, and an extended back end so his heels don't hit the rear-wheel hubs.

Fortunately, that's only a day or so of extra work for Cannondale Corp., based in Georgetown, Conn. Unlike larger rivals, the fast-growing $100 million bikemaker in 1991 installed a sophisticated manufacturing system that lets it alter tube dimensions with a few strokes on a keyboard and cut the correct angles with a computer-controlled laser. So while larger rivals struggle for months to build prototypes using clunky frames and fixtures, Cannondale turns out model variations in a matter of hours. This lets it refresh its product line annually, vs. the industry norm of three years, and attack new niches at low cost. "We can take chances in a way we couldn't before," says Richard J. Resch, vice-president for technology development.

Cannondale is one of scores of rising stars embracing information technology to get ahead. Using low-cost computers and new software applications for everything from computer-aided design to financial management, these small and midsize companies are wiping away advantages once held by giant rivals. Modem-equipped notebook computers let them set up international sales operations without expensive office space. Communications gear for issuing invoices and for sharing technical data enable pint-size suppliers to buddy up to key customers. And the Information Superhighway, although nascent, is presenting small fry with reams of market data and new business opportunities. "Big companies used to be able to do things small companies couldn't," says consultant Robert E. Hall, author of *The Street-corner Strategy for Winning Local Markets*. "But that gulf has narrowed."

For some, technology means survival. Cyrix Corp., a semiconductor manufacturer in Richardson, Tex., owes its existence to sophisticated design tools that let it clone industry-standard microprocessors made by Intel Corp. These tools let Cyrix' engineers simulate how a new design will work before they've drawn even a fraction of the millions of circuits that will ultimately be required. In this way, Cyrix says it developed its latest processor in two years for $15 million, compared with the four-year, $250 million effort to make Intel's 486 chip.

But like other high-tech upstarts, Cyrix takes its devotion to technology beyond the lab. All 20 U. S. salespeople work from their homes, fully equipped with cellular phones, notebook PCs, and pagers. And a real-time order-processing system lets them check for product availability at a moment's notice. Many rival salespeople must fill out sales reports, get approvals, and arrange follow-on meetings to close deals. "By eliminating all this goofing around, we can

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compete with companies with 200 salespeople," says Steve Domenik, Cyrix' marketing vice-president.

To be sure, Cyrix is an exception when it comes to information technology. "A pretty low percentage of small companies use computers for anything other than bookkeeping," admits Philip N. Nanzetta, director of the Commerce Dept.'s Manufacturing Extension Partnership, a nationwide program to bring high tech to small manufacturers. In fact, large firms are twice as likely to use computer-controlled machine tools and 16 times more likely to use robotics. And while 82% of 500 entrepreneurs surveyed by IBM say they use desktop computers, only 26% employ facsimile machines and only 6% plan to implement manufacturing automation systems.

But this technophobia is certain to weaken. For starters, major manufacturers such as Ford Motor Co. and Boeing Co. continue to require suppliers to install such technologies as electronic data interchange, which replaces paper order documents with standard electronic forms, dragging dawdlers into the Information Age. And more small fry are taking advantage of various consulting and technology-demonstration projects, such as Commerce's seven regional Manufacturing Extension centers and 28 "teaching factories" run by the National Center for Manufacturing Sciences in Ann Arbor, Mich.

Technology suppliers are poised to exploit this increased interest from small companies. "We think small and medium companies represent half the market, and that segment is growing at roughly double the rate of large companies," says IBM General Manager Wirt M. Cook, who runs the U. S. unit that sells to small and midsize companies. Once an afterthought for Big Blue, Cook's unit is now as profitable as its large-accounts business—thanks to a $750 million telephone-sales operation developed to reach this far-flung market efficiently.

Emerging communications and networking technologies are creating even more opportunities for small businesses to dance with the giants. New electronic bulletin boards let small defense contractors bid for chunks of large projects. And groups of suppliers are joining forces in electronically linked networks, temporarily creating "virtual corporations" capable of competing with the big boys for specific contracts. Already, some 40% of U. S. manufacturers are electronically linked to suppliers, customers, and partners, claims the National Center for Manufacturing Sciences.

The Info Highway may well cut overhead costs to little more than PC and modem

But this only scratches the surface of what's ahead. Whatever its ultimate form, the elusive Superhighway is certain to let entrepreneurs set up shop with little more in the way of overhead than a PC and a modem. One hint of things to come is CommerceNet, rolled out in California by a consortium of high-tech companies on Apr. 12. A layer of software and services running on top of the Internet, it's designed to let companies issue invoices, pay bills, and share data for everything from design specs to marketing videos via computer.

Of course, the large companies that stand to lose out to these upstarts are not sitting still. Big players, from computer makers to supermarkets, are implementing information systems to help them better understand and serve each customer's personal tastes. Some giant insurers and big telemarketing operations have installed sophisticated call-processing systems that let their telephone reps know the caller's buying habits and the date of his or her last order before picking up the phone, while some big retailers are even starting to offer personalized promotions for individual customers. "Large companies are getting very astute at how to appear small," says Joe Carter, managing partner at Andersen Consulting's Center for Strategic Technology in Palo Alto, Calif. "It's something small business needs to watch out for."

Still, smallness has its benefits when it comes to technology. While large corporations are trudging through reengineering programs and benchmarking studies, smaller rivals can simply forge ahead. Cannondale, for example, created its flexible manufacturing system from scratch in just one year. "Even after we decided technology was the answer, we didn't create any blueprint to follow," says Resch. "We just had a problem to solve, and we solved it." Such trust in technology could mean more trouble for the big boys. □

WITH TECHNOLOGY, SMALL COMPANIES HAVE AN EDGE...

- Unfettered by bureaucracy and expensive existing information systems, small companies can implement new technologies more rapidly and effectively than larger counterparts.
- As companies become electronically linked, outsourcing of functions from accounting to product development by large companies creates many opportunities for highly skilled small shops.
- Electronic bulletin boards and on-line data services give small companies access to more market data and business opportunities than ever before, allowing them to quickly attack new opportunities.

...AND CAN STILL KEEP UP WITH THE BIG BOYS

- Cheap computer-aided design and manufacturing software and flexible factories let small companies crank out multiple prototypes quickly and cheaply without large product development labs.
- Groups of small companies can easily use information links to form "virtual corporations," gaining market heft while enabling each to concentrate on what it does best.
- Mobile computing lets small companies compete around the world without setting up expensive branch offices.

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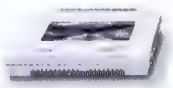

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BREAKING THE CHAINS OF COMMAND

With high technology, workers are given unprecedented power to make decisions that once were their managers' province

BY JAMES B. TREECE

Puzzled, Charles Chaser scanned the inventory reports from his company's distribution centers one Wednesday morning in mid-March. According to the computer printouts, stocks of Rose Awakening Cutex nail polish were down to three days' supply, well below the 3½-week stock Chesebrough-Pond's Inc. tries to keep on hand. But Chaser knew his Jefferson City (Mo.) plant had shipped 346 dozen bottles of the polish just two days before. Rose Awakening must be flying off store shelves, he thought. So Chaser turned to his terminal next to the production line and typed in instructions to produce 400 dozen more bottles on Thursday morning.

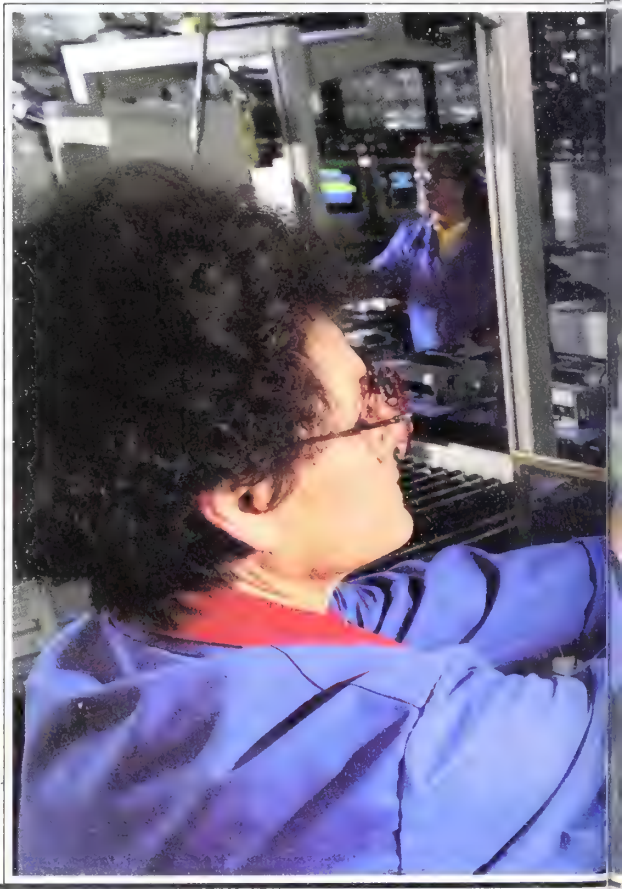
All in a day's work for a scheduling manager, right? Except for one detail: Chaser isn't management. He's a line worker—officially, a "line coordinator"—one of hundreds who routinely tap the plant's computer network to track shipments, schedule their own workloads, and generally perform functions that used to be the province of management.

As information technology spreads throughout Corporate America, it is erasing one of the great demarcations of the Industrial Age. Since the dawn of mechanization, there has been a sharp distinction between making policy and carrying it out. At the lowest rung of the organization, employees were expected to do as they were told—and leave thinking and decision-making to the higher-ups.

The democratizing spread of information technology, however, is changing all that. The growing use of computers in factories demands a new type of more involved, higher-skilled blue-collar worker. Likewise, the jobs of other low-level employees, from bank clerks to typists, are changing as they are expected to do—and think—more than ever. As these employees take over tasks that management used to handle, the roles and expectations of both workers and managers are being redefined. "Information technology is changing the way the whole workplace operates," says Joseph M. Roy, plant manager for Chesebrough-Pond's in Jefferson City.

Although information technology is altering work patterns for all employees, the changes are greatest at the lowest levels of organizations. Sure, CEOs have more data at hand today to inform their decisions, but they've always had access to whatever information was available. In contrast, workers are now being asked to analyze and act on data that previously were parceled out to them by jealous marketing departments or their own supervisors.

Take BC Composites Inc. The Medina (Ohio) company makes industrial ladder rails, primarily for its parent, Bauer Corp. BC's computer checks Bauer's mainframe for purchase orders at selected times daily. If it finds one, the computer automatically slots the new order into the plant's current work schedule in the most efficient way. For example, BC avoids making orange rails before



When Information Technology Alters the Workplace...

MANAGERS MUST...

- instill commitment in subordinates, rather than rule by command and control
- become coaches, training workers in necessary job skills, making sure they have resources to accomplish goals, and explaining links between a job and what happens elsewhere in the company
- give greater authority to workers over scheduling, priority-setting, even compensation
- use new information technologies to measure workers' performance, possibly based on customer satisfaction or the accomplishment of specific goals

WORKERS MUST...

- ▶ become initiators, able to act without management direction
- ▶ become financially literate, so they can understand the business implications of what they do and changes they suggest
- ▶ learn group interaction skills, including how to resolve disputes within their work group and how to work with other functions across the company
- ▶ develop new math, technical, and analytical skills to use newly available information on their jobs

ow ones, because the yellow rails ht emerge with orange streaks. If the it is 30 minutes away from switch- from yellow to orange when a new er for yellow rails arrives, the system immediately add the new order to current batch and push back the ngeover time.

actory workers coming in for the nt shift check the computer for edules that have been updated long after a sales department would have gone home and can call up technical diagrams if they need assistance preparing for a new order. "My customers are sending their orders to my line operators," says BC Composites President Victor E. Leonino, one of only two "managers" in the 30-person company.

In the white-collar ranks, secretarial work has undergone a similar transformation. In the past, a secretary might spend half his or her time answering the phone, a quarter opening mail, and the remaining quarter typing letters. Today, many secretaries are expected to be able to update spreadsheets and judge how best to graphically present data in charts. As time-pressed executives realize their support staff is computer-literate, they hand over more decisions and judgment calls. "Today, many companies want secretaries to have computer skills, and they're willing to pay more for them," says N. Elizabeth Fried, a Dublin (Ohio) compensation consultant.

NICK OF TIME: HP ASSEMBLERS GET TRAINING AS THEY WORK

To keep up, Manpower Inc. spends roughly 1% of its payroll for U. S. office temps on training programs in the latest information technologies. But just teaching temps the latest version of Lotus 1-2-3 isn't enough anymore. In the past, a temp with a problem could ask management what to do. But with middle-management ranks thinned and some data-entry workers toiling hundreds of miles away from supervisors, that's no longer possible. So now Manpower is field-testing programs to train temps in problem-solving techniques. Says Manpower CEO Mitchell S. Fromstein: "You have to empower people in a limited way. You can't say, 'If you don't understand something, bring it to me.' There aren't enough 'mes' to go around."

To be sure, managers don't always hand over tasks to workers. Sometimes information technologies allow the reverse to happen. With legal documents stored electronically, for example, lawyers can call up an important case file themselves instead of waiting around for a records clerk to track it down on a partner's desk.

Likewise, banks are using information technology to put managers back into line positions. In the collections departments at many banks, for instance, supervisors no longer parcel out unpaid bills to collectors based on, say, the amount due. Today, sophisticated computer software evaluates the risk and possible loss. The programs determine which accounts are most likely to respond to a call from a bank's collection officers—and which are a waste of time to pursue. Software also sets guidelines for write-offs and credit extensions. "Sometimes we've replaced dozens or hundreds of supervisors and let them do what they do best, which is collect," says Peter F. DiGiammarino, a consultant with American Management Systems in Fairfax, Va. "They're no long-

The New 'Catbird Seat'

Mark Bentley has an MBA in finance and spent nearly a decade in management consulting. But he leaped at a chance to run the 30-person computer department at a Boston records-management company. "I get involved in all areas of the company—marketing, product design, and customer bids," says Bentley, 41. His duties are so broad, he expects one day to run a division of his employer, Iron Mountain Records Management Inc.

A techie at the top? Don't laugh. As technology permeates work life, assumptions about career tracks are turning upside down. White-collar managers like Bentley flock to computer departments. Top-rated business schools—Harvard, Purdue, Stanford—weave information technology into curricula. Big service companies like Banc One Corp. and Federal Express Corp. include computer management in executive training. "Technology...will cause management in the future to be quite different from the past," says James I. Cash, MBA program chairman at Harvard business school.

But even as opportunities open for Bentley and others, technology may close doors for many more. Technology lets factories reduce supervisory jobs as it allows offices to run with fewer managers. "Some of the middle rungs on the ladder are missing," says Harley Shaiken, professor of work and technology at the University of California at Berkeley.

For computer jocks, the shift has been staggering. "I tell our technologists, if you're not doing something to contribute to the strategy, you're in the way," says Iron Mountain President C. Richard Reese. One result: Newly hired computer executives are twice as likely to come from general business as technology, according to a recent survey by the trade publication *Computerworld*. And nontechnical managers now hold nearly half the top jobs in computer departments.

REESE AND BENTLEY: COMPUTER MANAGERS NOW RISE TO THE TOP

With computer departments' expanded role comes more visibility and responsibility for their managers. At Xerox Corp. and Weyerhaeuser Co., nontechnical managers' careers skyrocketed after they turned around computer operations. Banc One President Donald L. McWhorter had managed the $83 billion bank's data-processing department. And W. H. Brady Co. Chief Executive Katherine M. Hudson's career soared after slashing costs at Eastman Kodak Co.'s computer department in the late 1980s. "There's no better catbird seat than the information view of an organization," says Bernard Mathaisel, director of Ernst & Young's Center for Business Innovation.

True, executive suites won't soon be overrun by the pocket-protector set. But, says Robert L. Heidrick, president of executive recruiters Heidrick Partners Inc., "the successful [executive] candidate needs to know how information technology can be a tool in his success." If he's right, more managers such as Bentley will use technology to chart their way to the top.

er passive middle management. Now they're valued line employees."

As managers delegate more decisions to workers or become workers themselves again, the roles for both change (table, page 113). Workers have to think like managers, understand the business implications of what they do, and master new technologies. Says American Management Systems CEO Charles O. Rossotti: "The trade-off is, they get more empowerment and freedom in how they work, but they have to accept more responsibility for real customers."

In turn, managers have to give up their old command-and-control methods. "Managers used to provoke you to do something. Now it's evoke," explains Ellen Hart, a vice-president at Gemini Consulting. That means managers must spend more time instilling commitment to the task and finding ways to measure results, not just track time spent on the job. Increasingly, it also means taking on the role of the so-called servant-leader. To Hart that means, "I'm there to get rid of any barriers in your way and to help you succeed."

One role left to management is finding information systems that can best serve the organization and the worker and finding workers compatible with those systems. Consider Hewlett-Packard Co.'s personal-computer business. Because virtually every PC is customized to the buyer's specifications, the computers are only partially assembled when they arrive at HP's Roseville (Calif.) distribution center. Workers on the center's final-assembly line, however, cannot be trained in how to assemble each of the nearly infinite number of possible configurations of modems, central processors, and other components. So as each computer comes down the line, the production worker scans an accompanying bar code. Detailed directions and schematics for assembling that particular unit then appear on a video screen in front of the worker. In essence, it's just-in-time training.

When interviewing job candidates, says James M. Barbour, HP's configuration center manager, "you look for people who enjoy real-time change." His job also has to embrace change: "I see myself more not as a manager, but as a facilitator."

As information technologies continue to blur the lines between white- and blue-collar jobs, more people will find themselves in a position similar to Barbour's: a manager who works to support workers who manage themselves. □

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A NEW FAA AIR TRAFFIC CONTROL SYSTEM IS YEARS BEHIND SCHEDULE

WASHINGTON BOGS DOWN IN BOOTING UP

Government may be out to reinvent itself, but it's still far from a digital revolution

BY MARK LEWYN

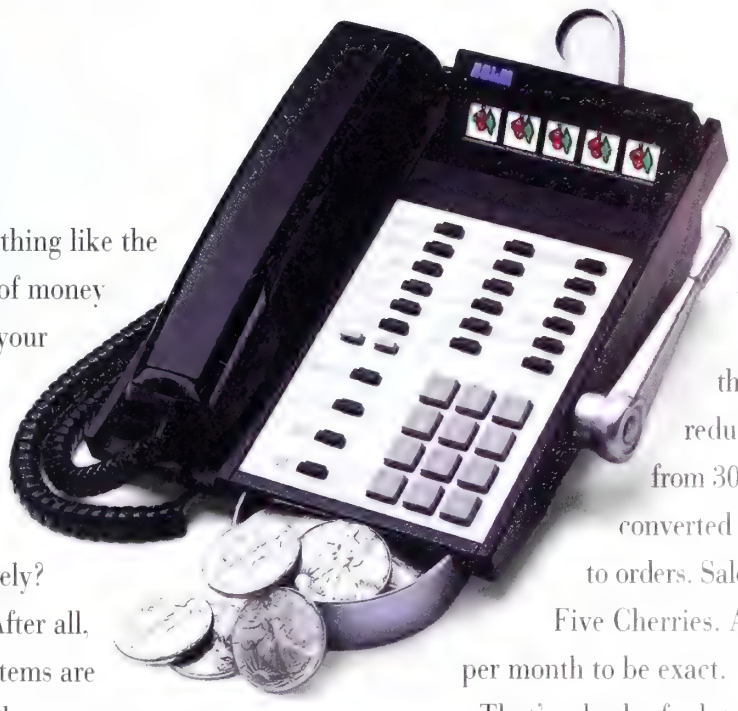
A decade ago, the U. S. air traffic control system seemed on the verge of breakdown. Not only had it been hobbled by the dismissal of striking controllers, but the computer system used to guide planes through the air safely was also prone to power failures and other glitches. Occasionally, planes would inexplicably disappear from the radar screen. So when the Federal Aviation Administration in 1982 proposed a $32 billion overhaul of the entire network—promising faster, safer, and cheaper trips—the airline industry cheered.

But the project is in disarray. In early March, FAA Administrator David R. Hinson announced that the heart of the project, known as the Advanced Automation System, is $2.6 billion over budget and years behind schedule. Now the new system won't be complete until after 2000—the third delay in as many years—assuming an angry Congress doesn't scrap it first. "We keep hearing fresh bad news about this every year," gripes a congressional aide who helps oversee the FAA.

The FAA project is a stark illustration of the problems Uncle Sam has when it comes to implementing and managing big high-tech ventures. Since all such projects must be competitively bid, protests from disappointed losers can bust deadlines and budgets. Meanwhile, relatively low government wage scales keep the feds from luring the best computer experts to manage its contracts. And to keep Congress at bay, bureaucrats often are compelled to hide problems until they become unmanageable. As a result, when government tackles info-tech programs, "it's like getting stuck in a swamp sometimes," says Robert E. Dornan, a vice-president at consultant Federal Sources Inc.

Still, government can't afford to dawdle in its efforts to automate. In his re-

It's payback time.



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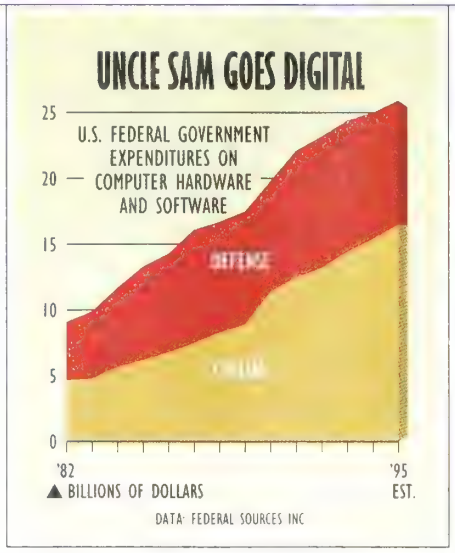
cent report on reinventing government, Vice-President Al Gore singled out improving computer systems as a central way of cutting expenses and improving service.

The government has been moving slowly in that direction for some time. In 1987, the U.S. Postal Service launched a $3.3 billion computerization program centered on automated mail sorting. Machines now read bar codes printed on envelopes by big mailers. And new equipment arranges sorted mail in the order of a letter carrier's delivery route. More than 50% of the 533 million pieces of mail processed daily now are handled at least partly by automation. The savings are dramatic: Sorting mail by hand costs $40 per 1,000 letters; automated processing costs $4. "Although it has been more difficult for us to automate than it might be in the private sector, we have been quite successful," says William J. Dowling, vice-president for engineering at the Postal Service.

Maybe. Savings from the new technology have yet to flow to the bottom line, however. This year, the Postal Service's deficit is expected to top $2 billion. The rub? While new technology has made the processing of mail far more efficient, the Postal Service has been slow to cut its workforce to reflect those savings. Labor, which accounts for 80% of expenses, actually grew 4% in the past year to 779,000, despite mounting productivity gains from automation.



Likewise, the Social Security Administration has had mixed success with its computerization efforts. The agency has been able to cut its workforce 24% since 1982 by computerizing many operations. And it now issues Social Security cards in five days or less, down from six weeks in 1982. It even assigns numbers to babies on the day they are born.

Yet the agency is still behind the technology curve. In his recent National Performance Review, Gore singled out two Social Security Administration disability programs—Disability Insurance and Supplemental Security Income—as in desperate need of automation. Of more than 10 million beneficiaries of the two programs, about 30,000 receive payments for which they're ineligible. That costs the government more than $1 billion a year while delaying checks to people who are eligible. Additionally, half of all Social Security payments are sent by mail rather than direct deposit to banks, making the agency the world's largest issuer of costly paper checks.

To address such issues, Social Security by 1998 will spend billions more to buy

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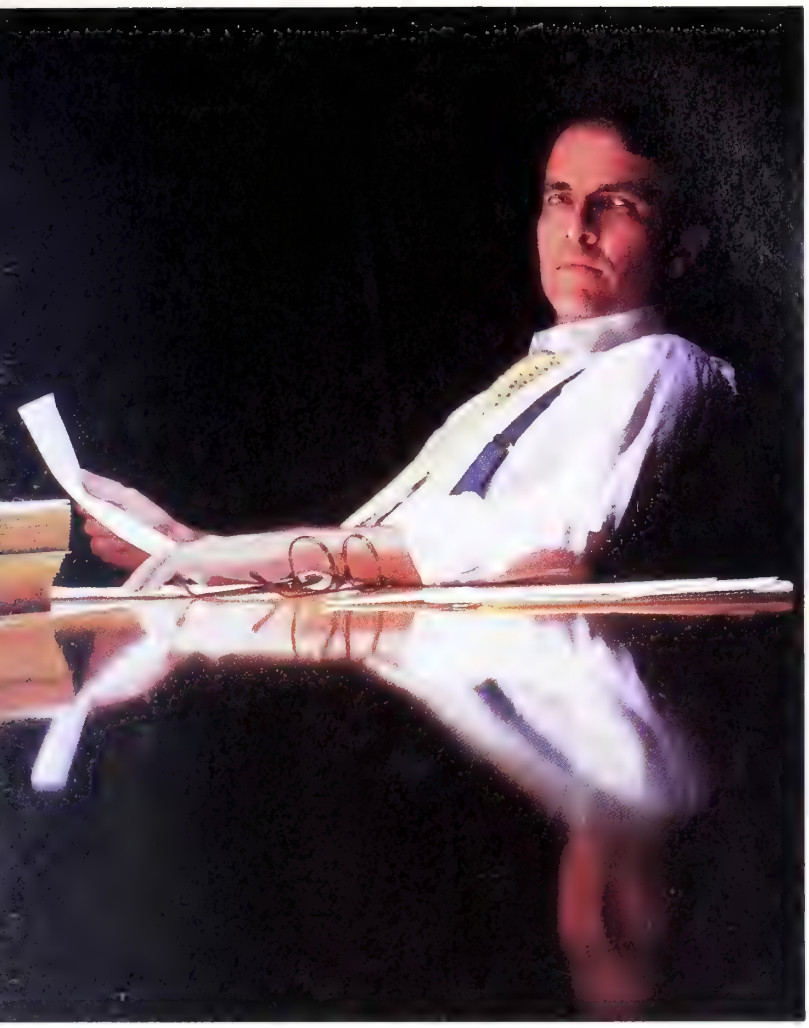

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80,000 workstations and 2,800 local-area networks to allow field offices to tap centralized records at headquarters and immediately determine whether someone is eligible for benefits. And the new system will allow direct bank deposit of all Social Security payments.

While the biggest returns from automation may accrue to paperwork-laden behemoths like Social Security, smaller agencies could also use some help entering the Information Age. The Federal Communications Commission, which will regulate the Information Superhighway, until last year was saddled with buggy-whip office technology like rotary-dial telephones and had only a handful of personal computers. "It's astonishing that we haven't had state-of-the-art communications until recently," says new FCC Chairman Reed E. Hundt, who proudly boasts that he is the first FCC chairman to have a computer on his desk. "It's time for us to get with it."

The White House thinks it's already there. The Clinton team quickly spent several million dollars on new phones and computers to handle the flood of calls and mail elicited by the Arkansan's more open governing style. Press releases are now issued both on paper and electronically via the Internet and commercial services such as CompuServe and America Online. The federal budget was published on CD-ROM for the first time this year. And in January, Gore held an electronic "town meeting" on CompuServe, allowing cyberpunks to query the Veep about everything from health care to telecom policy.

Such tools are sure to make government more responsive. But Uncle Sam still has a long way to go before his agencies are as information-savvy as the private sector. □

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THE INFORMATION

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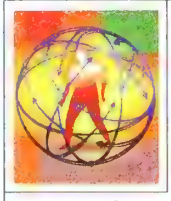
READY, SET— GO ON-LINE



Information technologies are fast changing how we work, play, and think. But what of those bypassed by the Superhighway?

BY EDWARD C. BAIG

As the unofficial Vice-President of Cyberspace, Al Gore loves to extol the virtues of the Information Superhighway. But he gets a little cagey when you ask him how he uses electronic on-line computer services. Does he, for example, occasionally visit the virtual corridors of the Internet as just plain Al?

Gore crafts an evasive politician's answer, but it soon becomes clear that part of the appeal of the electronic revolution for him and others is the freedom to communicate without the shackles of celebrity and physicality: In cyberspace, you are what you type. Gore had communicated with the system operator on CompuServe's White House forum for some time, having on-line exchanges about a variety of topics before discovering she was both deaf and blind. "The network is transparent to her intellect," Gore says. "Her participation in a physical community is difficult."

Cyberspace offers but one glimpse of the profound and pervasive impact digital and electronic technologies can have on how we work and play, think, and even feel. Indeed, those willing to latch onto the tentacles of the Information Age—multimedia, virtual reality, the Infobahn, interactive *anything*—already are experiencing technology's influences on nearly every commercial, educational, and cultural corner of society.

Examples abound: Computers and faxes make it possible for telecommuters to avoid the daily horrors of gridlock and mass transit while better meshing their work schedules and family time. Voice-recognition technology is helping people with disabilities perform the day-to-day tasks that most us take for granted. And try to remember the last time you visited a human bank teller.

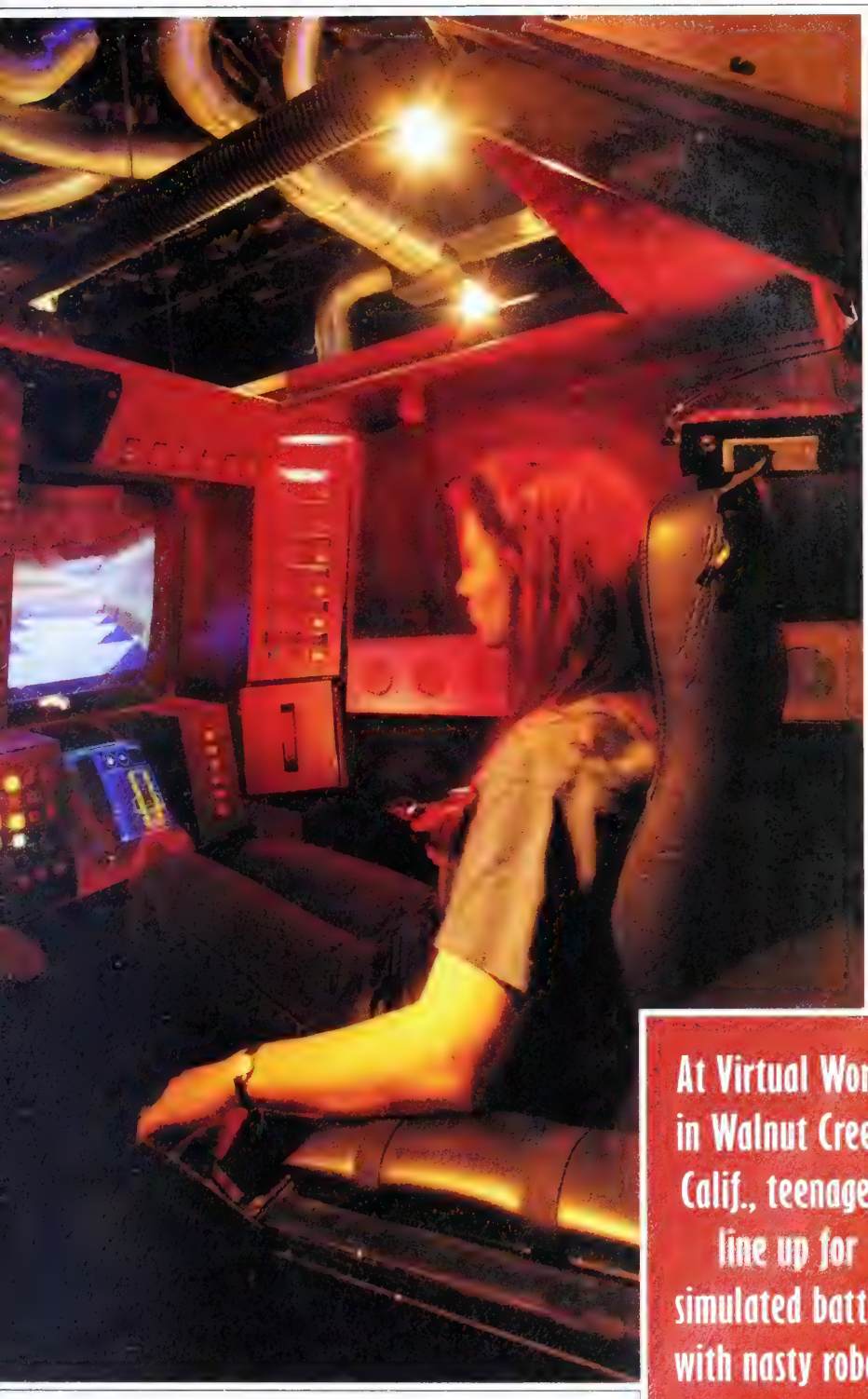
At digital theme parks such as Virtual World in Walnut Creek, Calif., teenagers queue up to play BattleTech, an interactive simulation pitting them against nasty outer-space robots. Virtual-reality exhibits have come to such museums as the Guggenheim Soho in New York, where helmeted gallery-goers were absorbed into a virtual Mozart string quartet and wandered around a simulated 4,000-year-old Egyptian temple.

Cyberspace is crammed with tales of strangers with disabilities comforting one another in support groups. During Southern California's earthquake, the Net served as a pipeline for people to spread word of their plights. On-line jobseekers may come across employment; lonelyhearts discover companionship. "Technology today is the campfire around which we tell our stories," performance artist Laurie Anderson told *Wired*, one of the hip new magazines monitoring the technoculture.

The marriage between the computer and the telephone is helping bring about the early stages of a communications revolution that may eventually surpass the scope and scale of the printing press. "The growth and innovation has come from machines talking to machines on people's behalf," says Paul L. Saffo, a director of the Institute for the Future in Menlo Park, Calif. One example: Coke machines that carry phone numbers to dial distribution centers for refills when supplies are dwindling.

What's more, telephones have traditionally served as a conduit between folks situated in different locations. But communication is moving toward a conceptual destination in its own right, a cyberspace where multitudes hold business meetings or schmooze in on-line watering holes.

"Interactivity" is another catalyst to the revolution. Musicians such as Peter Gabriel and Todd Rundgren are putting out multimedia CDs that enable the audience to impose their own creativity on the music. Says Rundgren, whose *No World Order* release on the compact-disk-interactive format lets listeners alter the mood: "Music and other presentational art forms have always had this strict agenda about how you experience them. New technology has made it possible for you and me to have two different viewpoints on the same piece of music." Interactive-TV ventures give viewers the power to select which camera angle to watch a ball game from or



At Virtual World in Walnut Creek, Calif., teenagers line up for simulated battles with nasty robots from outer space

oose when to order instant replays. Yet to applaud technology's wonders thely is somehow to dismiss our own sponsibility in helping mold the fu-re. The motto of the 1933 Chicago orld's Fair—"Science Finds, Industry pplies, Man Conforms"—is remark-ly out of date. An apt replacement for e 21st century, reckons Donald A. orman, an Apple Fellow and the au-thor of *Things That Make Us Smart*, would be "People Propose, Science Studies, Technology Conforms." Adds Don Tapscott, co-author of *Paradigm Shift: The New Promise of Information Technology*: "Technology will not necessarily make things better or worse. It provides an opportunity to do either profoundly, dramatically, and really fast."

Nor can we ignore technology's potentially unwelcome consequences. The fact that individuals will soon be assigned personalized phone numbers they can take from place to place must be viewed with some trepidation. Do we *always* want to be in touch? The most important feature on tomorrow's cellular phones, personal digital assistants, or other wireless contraptions may well become the on-off switch. Interactivity implies responsibility. People might prefer the passive experience of watching a movie or listening to music.

At the same time, how much trust do we want to place in machines, no matter how "intelligent" they become? Computerized software agents, which can sort through a gaggle of information sources to retrieve a customized collection of news stories we're supposed to want to read, carry another mixed blessing. "That would be a gigantic loss," warns David Gelernter, a professor of computer science at Yale University. "The whole point of a newspaper is to browse and find things that you didn't know you were interested in."

And yet there are great possibilities for electronic newspapers. Gelernter, the Massachusetts Institute of Technology's Media Lab, and Knight-Ridder Inc.'s Information Design Laboratory in Boulder, Colo., are among those experimenting with futuristic versions. Knight-Ridder is working on software that can be downloaded onto flat-screen portable computers. The multimedia prototype has headlines, columns, photographs, and advertisements. With a mouse, readers can enlarge type, jump to related stories, transform still pictures into videos, and order merchandise directly from ads. But those devising the newspaper of the

future would do well to keep in mind the original's advantages: It can be read on a commuter train or in the bathroom.

It's equally imperative for individuals and organizations constructing the Superhighway to make it portable and friendly enough so that anybody can, and would be willing to, join in. Despite some efforts to make it easier to navigate, the Internet, for example, is still an arcane and complex muddle, not at all inviting to many who are already comfortable with their PCs, much less the throngs of technophobes who can't program their VCRs. While the Clinton Administration insists the data highway will provide universal access, many observers caution that only the richest, smartest, or technologically inclined need bother going out for a spin, creating a societal rift between information haves and have-nots.

But if form holds true again, there's every reason to surmise that the box on your TV, computer, and other vehicles used to enter the highway will be affordable enough for virtually every member of society.

Virtual communities won't become completely civilized either until there is parity between the sexes. Roughly 85% of the regulars in cyberspace are men, though new female-oriented services such as Women's Wire in the Bay Area are helping change the demographics. Women also comprise about half the members of SeniorNet, a service (available through America Online) aimed at those above the age of 55.

Progress may come down to technological literacy: Will people be able to drive onto the data highway as effortlessly as we drive our automobiles? Many folks abhor computers and gadgetry of any kind and lack the state of mind to figure out anything more complicated than their blenders. "Start the Information Revolution without me," they proclaim—and given countless examples of poorly designed gizmos and indecipherable instructions manuals, who can blame them? That puts a special onus on those constructing the highway to make the thing easy to use.

But there must also be something good to use it for. Information overload is already giving many people sensory migraines; gobs of data are useless unless we can quickly and easily retrieve what we want or need. Software agents or gadgets that help impose order on the glut of information vying for our attention—lighter and vastly improved versions of the electronic books that already let folks search through the dictionary or Bible, perhaps—may provide remedies. But some, in fact, believe technology itself creates the glut.

"Technology is the campfire around which we tell our stories," says Laurie Anderson

Yet rather than couching the merits of "500 channels," say, in terms of the 490 we don't want to watch, it helps to think about multiple channels as a vehicle for tapping into things we care about, even if we're only part of a small fraternity that would look forward to a fly-fishing channel. Narrowcasting is already working nicely on the Internet, where users subscribe to newsgroups on almost any topic imaginable.

Technology also holds a great promise for education. Multimedia and an information infrastructure that links schools and libraries and lets students swap ideas over a network portend marvelous possibilities. Yet we are in the early stages of a furious debate over how best to put hardware in our schools.

Some museums seem headed down the right educational path. London's National Gallery has set up a multimedia Micro Gallery with interactive touch screens and animations that help patrons explore the permanent collection; Washington's National Gallery of Art will unveil a similar system next year. Visitors point to a menu on the monitor to locate masterpieces by artist, subject, time line, or geography. On the prototype, someone could zoom in on any portion of a color image of Jan van Eyck's *Annunciation* and read articles on related topics.

But not everyone can go to a museum in person. Products such as the *Microsoft Art Gallery* CD-ROM, based on the London collection, present an alternative. The disk contains accurate renderings of more than 2,000 works, biographies of artists, animated illustrations, and thematic guided tours.

The museum of the future may not even have walls. Institutions such as the University of California at Berkeley Museum of Paleontology and the Smithsonian are already exhibiting some works on the Internet.

Innovation is also helping artists express themselves in fresh ways. "I don't like to think about technology only in terms of how it represents work, but how it can become a medium for new work," says John G. Hanhardt, curator of film and video at the Whitney Museum of American Art in New York. For example, Liz Phillips, a multimedia sound sculptor who has displayed work at the Whitney, reports that 20 years ago it might have cost $40,000 to $100,000 and taken three weeks to install a piece that now takes two to three

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days and costs less than $20,000. As visitors stroll past Phillips' works, computers monitor their movements and alter the soundscape. "What an artist can do today is create an experience that is completed by the audience," says Myron Krueger, a virtual-reality artist and scientist.

The communications vehicle most people are already familiar with is electronic mail, fast becoming a staple in offices across the country. Heavy e-mail users appear better informed than their colleagues who don't check computer messages as often. Robert Kraut, a professor of social psychology and human-computer interaction at Carnegie Mellon University, found that the employees at a multinational New York-based bank who most used e-mail were in the loop on everything from the name of the latest corporate v-p to anticipated layoff numbers, even though management didn't make formal announcements over the e-mail network.

Studies also indicate that employees who join e-mail conferences are generally more likely to participate in the discussions than they would be in face-to-face encounters; for one thing, bosses are less intimidating to them. And since several persons can type at once, more opinions can be heard.

Outside the workplace, e-mail brings people together who wouldn't have met under other circumstances. "It's incredible how e-mail has changed my social life," says Penn Jillette, one half of the comical magic team of Penn and Teller and an on-line regular. "The idea of being stuck with friends you're geographically close to is insane."

The medium may also be less invasive than a conventional phone call. "I would spend five phone calls back and forth getting people in the wrong mood," says Jillette. "With e-mail you know exactly the mood I'm going to be in, because if I'm not in the mood to read your message, I'll save it for a couple of hours."

The on-line world can be an addictive place, however, and it provides psychological camouflage for people to mask their true identities—and genders. Still, misfits comprise only a tiny, albeit well-publicized, portion of the folks populating cyberspace, even in so-called multiuser dungeons or dimensions (MUDs). These are the artificial fantasy worlds in which "players"—there is no competition per se—interact with objects, and one another, in real time. As text scrolls on the computer screen, play-

Love at First Byte

It didn't start out like a match made in modem heaven. In 1991, a few days after joining ETC, a private e-mail discussion group on the GEnie on-line service, Laura Schneider, a court reporter living in Austin, responded to a comment about James Joyce. Having suffered through *Ulysses* in college, Schneider declared the book awful, incomprehensible, and pointlessly obscure. ETC member Jack Kolb rushed to Joyce's defense: Kolb was a professor of literature at the University of California at Los Angeles. Schneider didn't budge, and soon the pair took their sparks private—at first via e-mail, and eventually by telephone.

Several weeks later, Schneider hopped on a jet to Los Angeles to meet Kolb face to face. "There's about 10 seconds to two minutes where you're kind of looking at each other and trying to make the voice and face match the on-line style," she says. Whatever their initial awkwardness, the couple quickly realized they were as comfortable gazing into each other's eyes as they were reading each other's ASCII prose. Today, they are husband and wife.

Actually, Cupid has been shooting his arrows a lot in cyberspace: Myriad partners have discovered romantic bliss on-line, or have transformed electronic bulletin boards into high-tech pickup joints. Neither Jack, now 47, nor Laura, 40, admits to having been on the prowl at the time. Still, he says, "there's no question a certain element of innocent flirtation does make it up on the boards."

THE KOLBS MET IN AN ON-LINE SQUABBLE OVER JOYCE

Paradoxically, computer courtship may be viewed as a throwback to 19th century romantic rituals. Says Laura: "You used to write letters to people with similar tastes, and if romance blossomed, that was nice."

Since the wedding, Laura and her two children from a previous marriage have joined Jack in Los Angeles But each spouse still spends a fair amount of time on-line. And although Laura has taken on Jack's last name, she has not given in on other matters. Says she: "We'll be arguing about *Ulysses* forever."

By Edward C. Baig in Washington

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ers read descriptions of the virtual space they're in and type commands to make things happen.

For example, in the "living room" of the Lambda MOO—"based on a Winchester mystery house gone mad," says Pavel Curtis, the Xerox Corp. researcher who operates the MUD—you could pick up a frisbee by typing, "take frisbee." Next, you might say, "throw frisbee to John." John has the option to "catch frisbee" or ignore it. If he does so, a message will be printed out saying, "Frisbee lands on the ground." (The frisbee and other objects carry behaviors programmed by their creators.) "For people whose lives are controlled by parents or professors or bosses, there is a certain attraction to a world in which mastery and the admiration of peers is available to anyone with imagination and intellectual curiosity," writes Howard Rheingold, author of *The Virtual Community*. Of course, Curtis readily admits that MUDs are not substitutes for pressing the flesh, and eventually many MUDers do meet in person.

Outsiders heard to cry "Get a life"

The Doctor Is in (the PC)

In what areas of your life are you feeling stress?... Are people pressuring you to give up smoking?... Are you getting enough sexual satisfaction?"

Probing? Unquestionably. But the questions aren't coming from a psychiatrist. Instead, they appear on the screen of a PC, nestled in a corner office at the Interactive Health Center in Santa Monica, Calif.

The process is called the Therapeutic Learning Program, an interactive software Q&A designed to help psychotherapists narrow down the reasons patients are feeling stressed, so they can more effectively help them deal with their problems. "It's an incredibly effective treatment for a person who's going through a problem in living and needs immediate help," says Roger L. Gould, the clinical psychiatrist who developed the program after years of heading a neuro-psychiatric outpatient clinic at the University of California at Los Angeles.

Gould, who runs three clinics in the L. A. area, claims he can cut to seven or eight sessions the usual ten meetings it can take to deal with many common problems. At about $85 an hour, the savings can add up quickly. Pacific Bell, Walt Disney, and Intel are among the companies that send patients to Gould.

The Piano.

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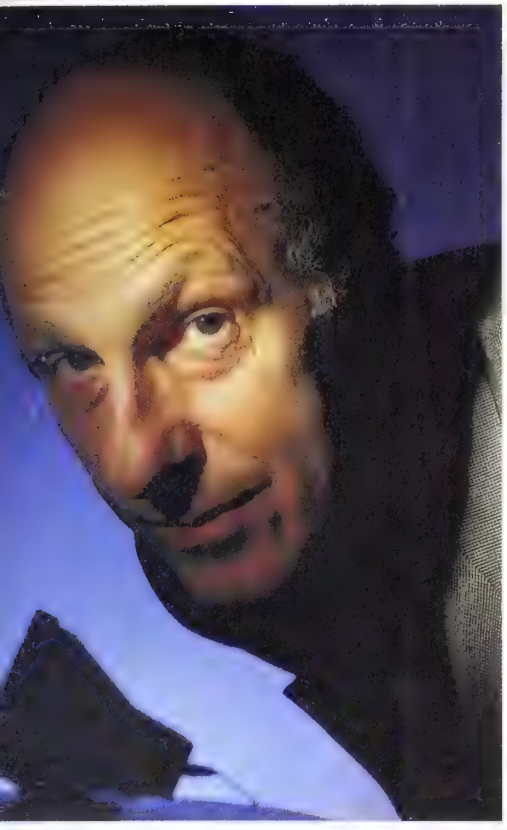


DAVID STRICK/ONYX

One Disney worker went to one of Gould's centers recently because she was having trouble sleeping and feared she would lose her job. She started by plugging in her stresses—a pressure-filled job, a failed marriage, mounting debts. Based on her answers, the computer then asked a different series of questions, with each set designed to narrow the focus of her problems. After a half-hour session, she was referred to one of the 15 therapists who devote part of their practice to patients referred by Gould. The patient's solution? Take stock of her own accomplishments, which were many, and judge herself against the criteria she and the therapist established.

GOULD: A PRELIMINARY Q&A ON THE COMPUTER HELPS THERAPISTS FOCUS

"It's a very effective managed program for what I call 'problems of living,'" says H. G. Whittington, medical director for the Managed Health Network Inc., which represents more than 300 corporations that send more than 1,000 patients a year to a Gould center. The program has its limitations: It doesn't work well on patients with alcohol or drug dependencies, or for more deep-seated psychological problems.

That's not stopping Roger Gould from thinking big. He's hoping to sell CD-ROM versions of the software and is seeking a venture-capital partner to increase the number of centers across the country. If he's successful, for many patients, the first stop on the way to psychotherapy may no longer be the couch, but a keyboard.

By Ronald Grover in Santa Monica, Calif.

The Key.

The reason the Digital Piano sounds as good as it looks is its Motorola DSP56001 24-bit digital signal processor, which produces CD-quality sound. From pianos to computers, products powered by Motorola are fast becoming a way of life.

MOTOROLA
Microcontrollers

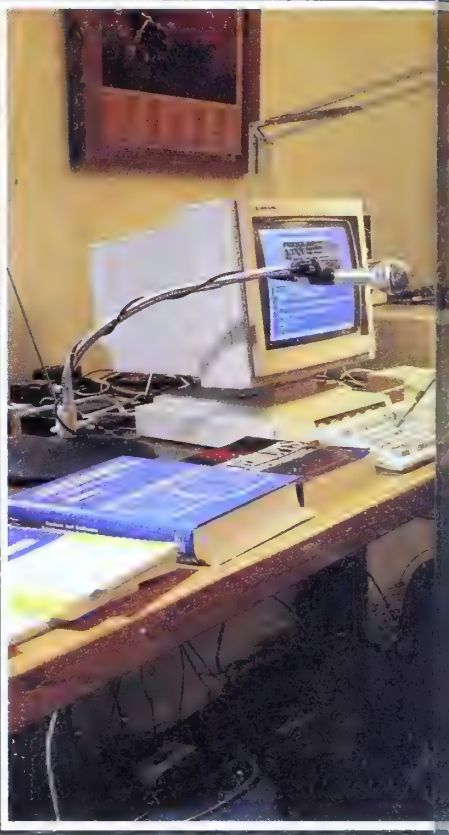
A Comeback by Keyboard

Perhaps more than most people, David Gentry, 32, appreciates how computers can revolutionize one's life. It's not because he works as a software engineer at Loral Vought Systems, a defense contractor, either. Gentry uses technology to help him perform tasks most of us take for granted. A quadriplegic since breaking his neck in a motorcycle accident 13 years ago, Gentry harnesses computing power to turn on lights, read an on-line newspaper, and switch channels on the TV set in his Arlington (Tex.) home.

Before the accident, Gentry had given no thought to a career in computers. But the disaster dashed his dreams of becoming an industrial engineer. Without computer technology, "I don't know if I'd be employable," says Gentry, who rapidly takes notes on his palmtop computer with a pointing device called a mouth-stick he grips between his teeth.

Despite graduating with the highest grade point average among his computer engineering colleagues at the University of Texas at Arlington, Gentry was one of the last in his class to land a job. With some help from a classmate, Gentry was finally hired after a six-month search by LTV Corp. Aside from a raised desk and speakerphone, Gentry doesn't use special gear in the office.

At home, his wheelchair is equipped with a radio transmitter under the armrest and computer controls under the seat. With a control



REID HORN

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SOFTWARE ENGINEER GENTRY WORKS AT HOME WITH A "MOUTH-STICK"

box he maneuvers through a so-called sip-and-puff device—he sucks on a strawlike tube to create pressure—Gentry can open the front door. With a voice-recognition system on the PC in his bedroom, he can bark commands to surf through TV channels, answer the phone, and even raise and lower his bed.

Still, computers pose some special challenges. Because he can't hold down more than one key at a time, Gentry has equipped his machine with a special software program provided by the Center for Computer Assistance to the Disabled in Dallas. It handles PC functions activated when two keys are pressed simultaneously. And he needs help to insert and remove diskettes. But that's a minor annoyance in what is otherwise a remarkably independent life.

By Wendy Zellner in Dallas

when talking about people who spend gobs of time on-line often miss the point: The modemed, in fact, may have quite the life. Says Gore: "The people who express this concern have been strangely silent for three or four decades about the millions of Americans who come home after work, turn on the television, and just zonk out for the rest of the evening. That's the real technological threat to community."

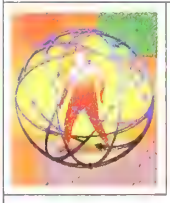
Technology that goes through the proper hoops of human testing can make good on one of its grand promises: to free up time for the ideas and people that concern us most. But if anything, tomorrow's changes will move at an even more dizzying pace than those of the past, making it that much more critical for society to guard against a widening gulf between the technologically savvy and those who throw up their hands and surrender. No one can calibrate with certainty how the high-bandwidth future will touch on our day-to-day lives. Yet by taking an active role as individuals, we can improve the odds that the impacts will be positive. □

Control.

Two Motorola 68HC05 microcontrollers give you complete control over the MouseMan Cordless. One transmits mouse movements, the other receives and displays the movements on-screen. From mice to 4x4s, products powered by Motorola are fast becoming a way of life.

MOTOROLA
Microcontrollers

ATTACK OF THE CYBER SNOOPERS



Experts are plenty concerned about how secure data will be—and they're not buying reassurances from the government

BY LINDA HIMELSTEIN

M. Carling is a very private man. To help keep it that way, he won't inform strangers, much less a reporter, what the "M" stands for. He carries no insurance, nor does he possess an American bank account. When he is ill, he insists that doctors treat him anonymously. Even Carling's California driver's license lists no home address. "The less information about me available to government and big business, the better off I am," says Carling, a computer-security consultant and former researcher with the Hoover Institution.

M. Carling's behavior may appear excessive, even paranoid. But his reason for it is rather mainstream, given the current environment. Put simply, it's fear. Carling and a growing number of Americans are afraid that society's increasing dependence on electronic data storage and communication will make it virtually impossible for them to safeguard their privacy.

Technological advances and widespread use of computers have made it simple to transfer all kinds of information about consumers—proprietary or not—among banks, hospitals, government agencies, or law enforcers. And with the prospect of an Information Superhighway, telecommunications, cable operators, and other businesses will have the ability to assemble these disparate types of information about an individual into an all-but-comprehensive personal dossier. "Interactive technologies pose great opportunities," says Janlori Goldman, director of the American Civil Liberties Union's Privacy and Technology Project. "But we need to realize that if we don't protect personal information on the highway up front, people won't use it."

President Clinton's plan for health care is making such concerns more visible. Under the Clinton model, everyone seeking medical treatment would be required to carry a health security card, which would include insurance information as well as personal medical histories. Already, Congress is debating legislation that would protect the confidentiality of medical records—a measure that's designed to unify what many experts consider to be inadequate and ineffective state laws. "Medical records are not private and there's nothing we can do to make them private," Robert Gellman, chief counsel to the House subcommittee working on the legislation, said at a conference devoted to computers and privacy in March. "What we can do is to make sure they are treated fairly."

Other related legislative proposals include one that would establish a federal agency to create privacy policies and serve as a government watchdog. Another bill seeks to strengthen existing laws that protect access to and use of people's credit data.

But the proposal that has gotten the most notice is one backed by the National Security Agency, which seeks to protect the privacy of telephone and computer communications while at the same time allowing law enforcers easier access to those conversations when necessary. The NSA plan is based on installing a tamperproof encoding device, known as the Clipper chip, in telephones. Unscrambling communications would then only be possible

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through the simultaneous use of two keys held by different government agencies. The NSA claims that it would be virtually impossible to abuse the system because law enforcers could only obtain the keys with a court order. "Unreadable encryption is the key to our future liberty," says Stewart A. Baker, general counsel at the NSA. "We believe we have found a way to ensure terrific privacy without putting law enforcement out of business."

Opponents of the plan say the Clipper model actually erodes privacy. "This is like letting the government have the master key to every house in the country," says the ACLU's Goldman. The solution offered by business executives excludes government from the process altogether. They want to allow the marketplace to balance the economic benefits consumers derive from improved technology with the risks those developments pose to privacy. For example, purchases by credit cards can now be made almost instantaneously over the phone or by computer, says Duncan A. MacDonald, general counsel of Citicorp Credit Services Inc. That makes privacy vulnerable, but MacDonald argues that the convenience makes the trade-off worth it.

Companies such as Citicorp, American Express, and TRW Information Systems & Services say they are working hard to ensure that their databases are impregnable and that their information is accurate. TRW, for instance, which maintains credit records on some 180 million Americans, has spent $30 million in the last three years updating its computer network and launching programs to soothe customer concerns.

The Cleveland-based company now provides its customers with a free credit report annually, and says its efforts have led to an 80% reduction in mix-ups on financial data from people with

CONGRESS TACKLES PRIVACY AND TECHNOLOGY

- Proposed legislation would create a five-member Privacy Protection Commission, a watchdog agency that would be responsible for setting privacy policies and ensuring that access to and use of electronic data is not abused.
- The proposed Fair Health Information Services Act is aimed at protecting the confidentiality of computerized medical information. The measure establishes uniform privacy standards and includes civil and criminal penalties for those who improperly use patient data.
- The Consumer Reporting Reform Act addresses access to, as well as accuracy and privacy of, consumer credit information. Among other things, the bill provides consumers with a free credit report annually and allows them to opt out of having their personal data used for marketing purposes.

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similar names. "Consumers have interests in economic choice and privacy," says Martin E. Abrams, director of TRW's privacy and consumer policy. "Our job is to find an equilibrium between the two."

Corporate safeguards, however, can't always prevent mishaps in a business environment that hungers for any tidbit of information about potential customers. In March, for example, National City Bank in Cleveland mistakenly gave a telemarketing company detailed data on approximately 180 of its customers, including their account numbers and Social Security numbers. The bank said it has taken steps to make sure the slipup won't happen again, and it promptly offered those affected customers new accounts and credit cards. But privacy activists point to the incident as an illustration of how easy it is for electronic data to wind up in the wrong hands.

With the Clipper chip, government theoretically would have access to everything

Apart from human error, hackers have been able to find cracks in supposedly airtight systems. This small group of so-called cyberdeviants can use valuable information they improperly obtain, such as the spending habits of certain individuals or the identity of people they telephone, for destructive purposes. That is why privacy advocates, who are overwhelmingly opposed to the government's Clipper chip plan, are encouraging the private sector to develop better encryption programs. Such demands are increasing as electronic services become more popular. "People have to understand that responsibility for making sure information about them doesn't get into the wrong hands is theirs," says Carling, who is working on some cryptographic software of his own. "We now have the technology to put our electronic messages inside envelopes."

A more radical approach to privacy—and one that is unlikely to be implemented—is to create a market for personal information whereby individuals charge companies a fee to use their individual data. "The cost of invading your privacy is cheaper and cheaper as the development in technology grows," said Kenneth Laudon of the School of Information Systems at New York University at the conference on computers and privacy in March. "The goal here [by creating a market for your personal data] is to strengthen individual control of information."

Whatever wins out in the end, it's clear that privacy interests are on a collision course with the dramatic advances made—and about to be made— in electronic communications. And many experts predict that if we don't resolve these issues, we may end up living George Orwell's *1984* in 2004. □

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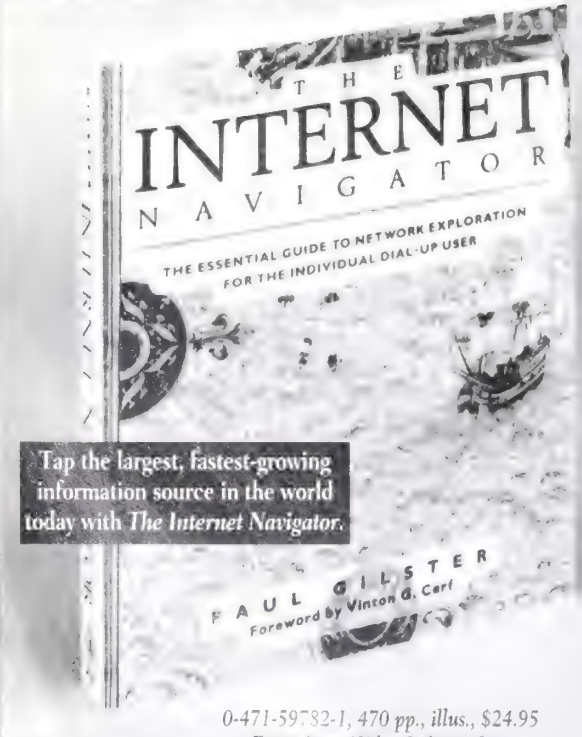

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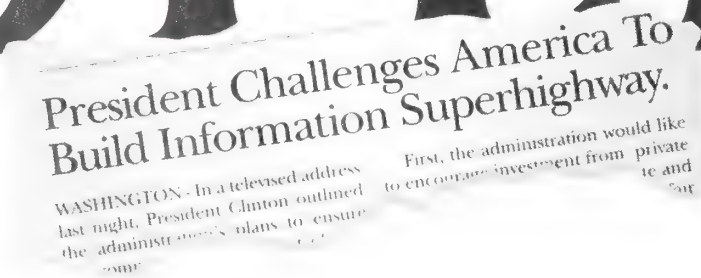
President Challenges America To Build Information Superhighway.

WASHINGTON - In a televised address last night, President Clinton outlined the administration's plans to ensure

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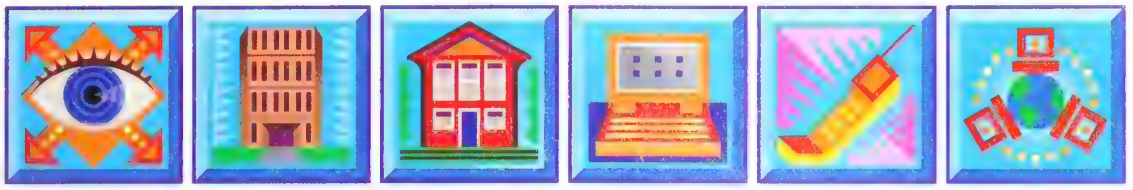


BusinessWeek

PERSONAL TECHNOLOGY: A USER'S GUIDE

Becoming a cybernaut is easier than you think. We'll help you define your needs, describe what's on the market—and ask users how they've fared with it

ILLUSTRATIONS BY JEAN TUTTLE

GETTING IN STEP

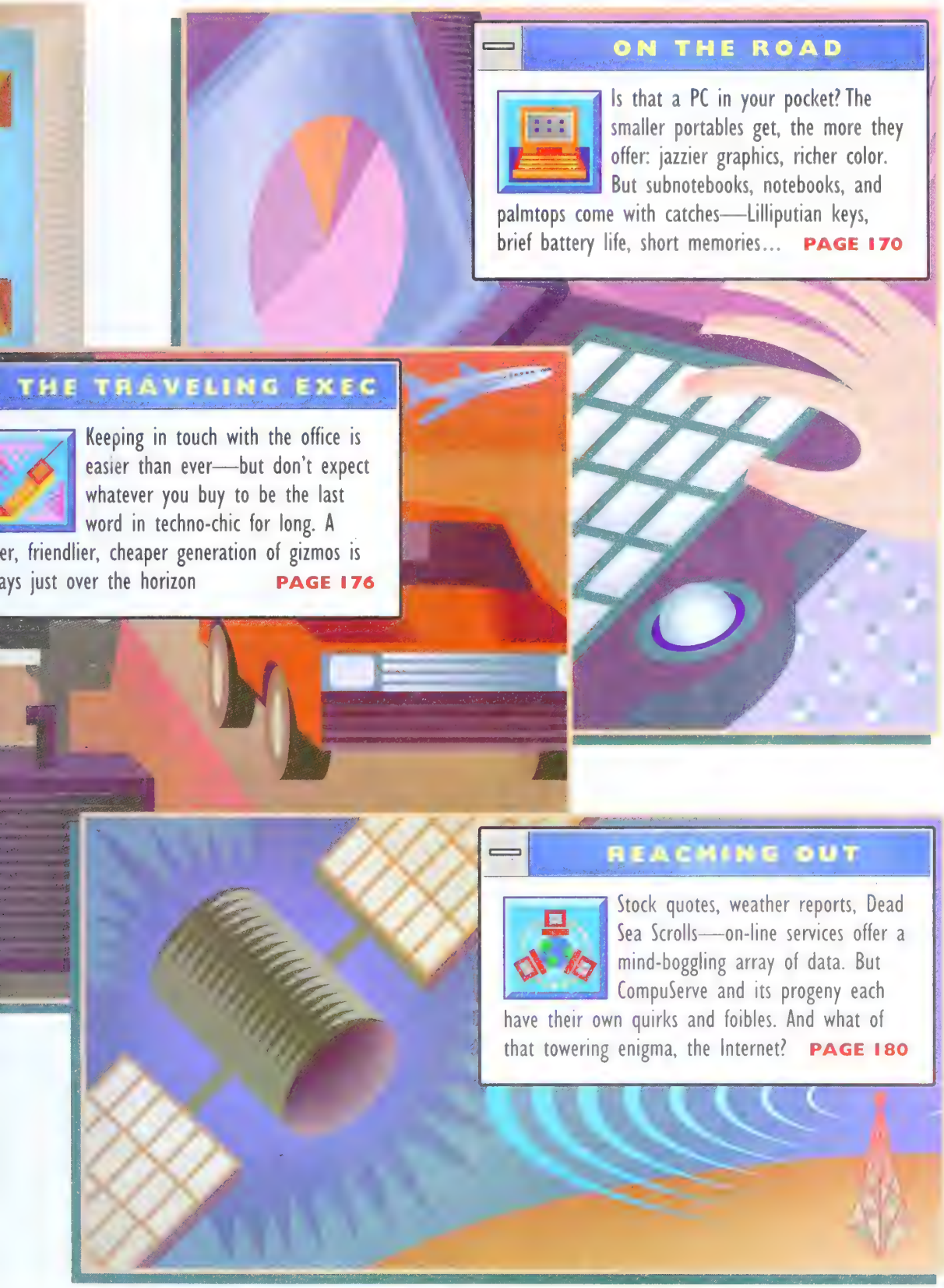
What, you're still PC-illiterate? Consider the reasons for taking the plunge: parental guilt, career needs, convenience, on-line gabfests.... Here's why—and how—some other timid souls tackled their technophobia PAGE 144

THE COMPLEAT OFFI

Office systems are getting so powerful, so fast that it's hard to go far wrong in buying one. But you have to take the search one component at a time—and ask tough questions every step of the way PAGE 1

THE HIGH-TECH HOME

At these prices and with these features, home PCs can't get much friendlier. A few decisions—mail order or retail, Mac or DOS, multimedia or not—and your family can enjoy its latest home improvement PAGE 160



ON THE ROAD

Is that a PC in your pocket? The smaller portables get, the more they offer: jazzier graphics, richer color. But subnotebooks, notebooks, and palmtops come with catches—Lilliputian keys, brief battery life, short memories... PAGE 170

THE TRAVELING EXEC

Keeping in touch with the office is easier than ever—but don't expect whatever you buy to be the last word in techno-chic for long. A er, friendlier, cheaper generation of gizmos is ays just over the horizon PAGE 176

REACHING OUT

Stock quotes, weather reports, Dead Sea Scrolls—on-line services offer a mind-boggling array of data. But CompuServe and its progeny each have their own quirks and foibles. And what of that towering enigma, the Internet? PAGE 180

TACKLING TECHNOPHOBIA

You've stayed PC-illiterate this long. But reasons to log on are starting to pile up. Here's why —and how— the formerly techno-timid are taking the PC plunge

BY CATHERINE ARNST

Everyone you know seems lost in cyberspace. Friends have started talking bytes and Windows and SoundBlaster. They send one another notes filled with such glyphs as :) and :(and address them to 1231452@mcimail.com. You can only stare blankly when someone asks for your e-mail address. And you're beginning to wonder if you can stay solvent without using Quicken to manage your finances.

Don't panic. Even though folks are piling onto the early stages of the Information Superhighway quickly enough to cause traffic jams, you shouldn't feel ashamed about not having invited a computer into your home yet. In fact, almost 70% of U. S. homes remain computerless. so the PC has a ways to go before it becomes as ubiquitous as the compact disk player. (You do have one of those, don't you?)

But inexorably, computers are entering the lives of even the most technophobic. You may be PC-less at home, but if you work in an office, chances are there's one on your desk or the next one over. With an estimated 123

FRIEDA AND SAMUEL BLOCK

THEY JUST REPLACED THEIR IBM WITH A MAC. NOW, SAMUEL, WHO IS DEAF, SPENDS HOURS EVERY DAY AT THE COMPUTER, WRITING LETTERS, DOING TAXES, AND MESSAGING FRIENDS

lion PCs installed around
world, you must be
nging around one of these
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That also means you prob-
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Even if you don't know
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nological skills. You (or maybe your kids) have learned to program a VCR, master the tricks of Sega-Genesis or Gameboy, or use that electronic organizer your techie friend got you for Christmas. You can negotiate your way through all the complicated number-pushing of a voice-mail system or your local cash machine. In other words, there is virtually no one in the U. S. who does not use some form of computer technology on a daily basis—and sooner or later achieves some level of comfort with it.

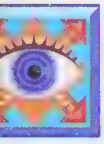
But maybe it's time to take the big plunge and buy a home computer (page 160). While relatively few U. S. families currently own computers, the number jumps to 70% for households with incomes of more than $100,000. And those who already have computers can't help but notice that today's desktop wonders bear scant resemblance to the clunky machines of only a few years ago.

Many of these upper-middle-class families are buying computers for the same reason they do so many other things: They're convinced it's good for the kids. The sprouts probably already work on PCs at school. And if, like most kids these days, they've been playing video games since they were toddlers, they are ready to move on to something more challenging. Besides, if you've even glanced at some of the classy new educational software out there, you've no doubt decided you'd rather have your kids designing and managing cities with Maxis' SimCity than blasting blood all over in Mortal Kombat on their entertainment system.

The "edutainment" programs that are the rage today have inspired a burst of home-computer buying, especially multimedia machines. These are the PCs that can put on a dazzling show of stereo sound, graphics, and full-motion video, thanks to the addition of a CD-ROM player (a modified CD player), speakers, and special software. Market researcher Link Resources Inc. says consumers bought a total of 718,000 multimedia-equipped computers for the home last year, compared with 279,000 in 1992.

In short, industry executives figure they have found something that sells almost as well as sex. "Parental guilt is a key driver in this market," says Robert W. Bauer, director of desktop marketing for Compaq Computer Corp. And if you're going to get your kids on the fast learning track, you might as well spend the extra $500 to $800 to make that PC multimedia. Because as software czar William H. Gates III points out—and when Bill talks computers, you'd best listen—"By 1995, people will say, 'Of course my PC has a CD. Yours doesn't?' "

And kids take to computers like they do to candy. Ask Gino del Guercio, pres-



If you thought you had to be young and video-game literate to master the intricacies of a personal computer, consider Samuel and Frieda Block, resi-
ts of the Leisure World retirement commu-
in Laguna Hills, Calif. They are 83 and 80,
pectively, and are typing away at a Macin-
Performa 450 they bought three months
to replace an aging IBM PC. Before taking
plunge in 1988, neither Frieda, a former
mentary math teacher, nor Samuel, a retired
eral government statistician, had worked with
nputers.
They had better reason to buy a PC than
st senior citizens. Samuel has been deaf
e age seven, a result of spinal meningitis. He
ends on letters to stay in touch with his
ny friends and four sons. "But he was so pro-
ed by the typewriter because he couldn't
r the bell that signaled the end of a line,"
s Frieda. Their sons, all computer-literate, sug-
ted a PC.
amuel can now do a lot more than write let-
. He helps other people with their taxes,
s games—Scrabble and golf programs are
favorites—and best of all, can communicate
deaf friends via Prodigy Services Co., an on-
service. Without a PC, Samuel can only talk
distant friends and relatives over a TDD, or
communications device for the deaf, that re-
es either special equipment or an operator
act as translator.

"He spends at least a couple of hours a day on the computer," says Frieda. "He has some deaf friends in L.A. and in the New Jersey-New York area, and it's a great way for them to talk." Son Joel, an attorney with the Writer's Guild in Los Angeles, says he is under heavy pressure from his parents to sign on to Prodigy and buy a Mac, so he can easily share files with his father. "We'll talk him into it," his mother promises. In fact, says Joel, he has already been persuaded: "This summer, I promise."

Frieda has yet to master the Macintosh, she admits. She has been busy having the apartment redecorated and besides, she says, "we just don't have the patience to read the manual." She did enjoy the IBM, however, going so far as to take a course in programming so she could create and solve her own math problems—"just for fun, you know." She also used it to keep track of her sister's medical records, bills, and hospital stays before she died.

The Blocks aren't the only members of their set to have a PC, but Frieda says there aren't many: "We have one friend, a very brilliant woman, who bought one. But she finally had to sell it. She just couldn't learn how to write letters or anything on it." There's a lesson to computer companies here: There may be a huge untapped market of senior citizens who, despite their lack of past experience with computers, would be more than happy to jump into the electronic age.

By Catherine Arnst in New York

ident of Boston Science Communications Inc., a video and multimedia production company run out of his Easton (Mass.) home. Ben, his six-year-old, started playing with Gino's Apple Macintosh computer when he was three. Michelle, now four, picked it up about a year ago. Ben and Michelle have their own secret passwords, sign on whenever they feel like it, and use about a half-dozen programs, including a couple of graphic-design programs meant for adults. "I think—because children's minds are so plastic and their memories are so good when it comes to language—that they have a real affinity for understanding the language of the computer," says del Guercio. Their favorite program, he notes, is Kid Pix, a children's art program from Broderbund Software Inc. But they also like to play with math and reading programs, which, del Guercio says, keeps them away from television.

Good parenting isn't the only justification for buying a PC. You might want to bring work home from the office, get a better handle on your finances, produce spiffier correspondence, or take a spin on the Information Superhighway. A PC can act as an answering machine and a fax as well.

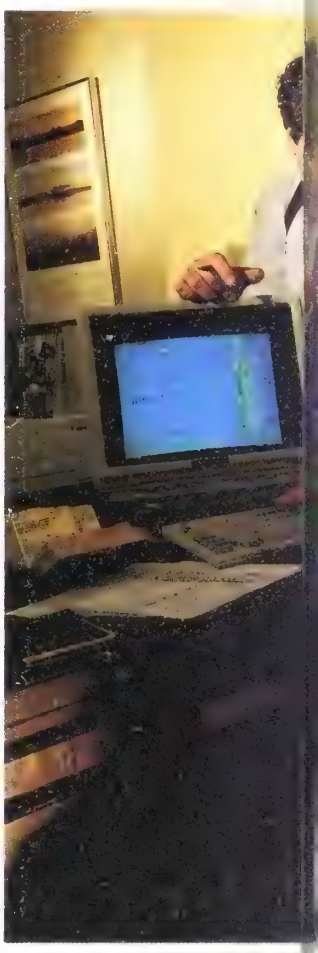
Or perhaps, in this era of corporate downsizing, you've decided to junk the whole idea of a career in the office-tower world. Instead, you're going to set up your own business. You have an idea, maybe a client or two, even business cards. Now comes the scary part: getting a computer. You can't call in the folks from information systems and ask them to set you up. You're actually going to have to . . . do it yourself!.

Welcome to a world that the computer industry is hot to serve—SOHO. No, not the hip Lower Manhattan neighborhood. It's the small office/home office market that has become the industry's fastest-growing segment. SOHO buyers have a wealth of bewildering choices. They can go to their local computer store, their local Staples, their local Sears, or their maybe not-so-local electronics superstore. They can get a bunch of catalogs or call 800 numbers. All the while, they figure if they just look one more place, or wait one more month, they might be able to get a better price, or configuration, or processor, or software package—or maybe even a job back in a corporation where someone else will take care of all this for them.

Once you decide to do the deed, you will probably start by talking to knowledgeable friends. But be prepared: Every cottage expert will offer a different opinion on what you should buy. The first debate you'll be thrown into is Apple vs. IBM. Apple Computer Inc.'s Macintoshes have some of the world's most loyal customers, who revel in its ease of use, snazzy styling, mouse-driven commands, and fun graphics (page 162). Their popularity in schools also makes them the kids' favorite. But remember, 90% of the PCs out there are based on IBM standards, which means they use Intel Corp. microprocessors and Microsoft Corp. operating systems. If you stick with the IBM standard, you may get off a bit cheaper—though Apple price cuts

LLOYD AND MYRON COHN

CALL IT A FAMILY AFFAIR. THE SON GAVE THE COMPUTER BUG TO DAD. THEN MOM CAUGHT IT. NOW THEY'RE ALL CLICKING AWAY ON PCs AND PDAs



STILL COMPUTER-SHY? CONSIDER THIS:

PRICES

They aren't likely to get much lower soon. $1,000 to $1,500 buys a complete computer setup these days including lots of pre-packaged software; $500 to $800 more adds a CD-ROM player and other multimedia capabilities.

KIDS

Set them in front of a PC and cha are they'll forget about video gam maybe even TV, preferring to exp the digital world of Carmen Sandi or create their own with SimCity. will have fun and learn something.

Like son, like father. Five years ago, Lloyd Cohn helped install state-of-the-art information technology at Quality Letter Service, ensuring the New York direct-mail shop would maintain its high-tech reputation. Then he turned his father, Myron, a first vice-president at Gruntal & Co., into a computer maven. Now, both are inseparable from their personal digital assistants, which they use to store appointments, sketches, wine lists—even a "fuzzy logic" guide to their favorite restaurants.

At work as Quality's director of operations, Lloyd, 29, uses computer-driven printers to print calligraphic addresses on Chanel catalogs and personalized fund-raising letters. "The most expensive piece of mail is the one that doesn't get read," he says.

To track both business and personal affairs, Lloyd uses Sharp Corp.'s version of a Newton MessagePad. "It basically stores my life," he says. Running between folding machines, computers, and phones in the shop, Lloyd carries the Newton to jot down job sketches, schedules, phone numbers, and employee memos. At customer conferences, Lloyd can use the built-in infrared communicator to beam prices to a co-worker's Newton.

Lloyd also keeps his father up and running. In Myron's Water Street office, Winslow Homer's prints of Hampton beaches overlook a sea of high-tech equipment. His desk is crowded with a "no-name" 486 PC, an ADP quote terminal, and a 12-inch TV with closed captions. Dow Jones, CompuServe, Disclosure, and Prodigy are just a few services that funnel him information. A CD-ROM encyclopedia is handy, too. Away from the office he jots notes and numbers on his Sharp Wizard 9600 for later transfer to his PC.

The most useful program: Quotron's Broker's Notebook, a specialized database manager. The program can pluck the names of customers who own a specific stock out of a list, then merge them into letters containing company news. It tracks sales and dividend payments. And at tax time, it automatically generates statements of gains and losses for customers.

It was only a matter of time before Lloyd's mom, Nancy, came on-line, too. At the New York Association for New Americans Inc., Nancy helps recent immigrants find jobs. With the group short on both computers and clerical help, Lloyd picked out a new notebook machine to help his mother track clients, write letters, and graph the success of job-training programs.

The best part about the computers: making it possible for the senior Cohns to escape to their Long Island beach house. "We can bring the office with us now that my husband and I are on-line," says Nancy. That means Myron can spend less time sighing at Homer's paintings and more time on the beach at Amagansett with a notebook on his lap.

By Ruth Coxeter in New York

ve drastically narrowed the
p. You'll also have an easi-
time exchanging files with
e PCs in most offices.
f you want to avoid heat-
debates with your friends,
ke your pick from the doz-
s of computer magazines
d how-to books (page
0). That was how Joan Sil-
rman of New York got
rted. The 41-year-old law-
yer decided in January that she'd had enough of mediating divorces. So she left her job to start the sort of niche business that New York is known for: Multi-Ethnic Talent & Promotion Inc., a talent management company for ethnic actors. She had already signed up 15 foreign and domestic clients and needed a way to keep track of their contracts, working-papers status, and the like.

Silverman decided from the outset to go with an IBM-compatible because that's what she had used in her law office. She read a magazine article on how to set up an office and haunted the computer sections of bookstores. Then she called Gateway 2000, one of the largest mail-order computer distributors, and spent an hour or so on the phone talking hardware and prices. Next, on the advice of a friend, she went to several computer stores. In a few weeks, she says, she could figure out the difference between DX and SX (different versions of Intel microprocessors), knew what

SOFTWARE

ome really useful stuff out
uit's Quicken, for example, a
finance program, makes
easy: Compton's Interactive
edia provides an entire
library at your fingertips.

PORTABILITY

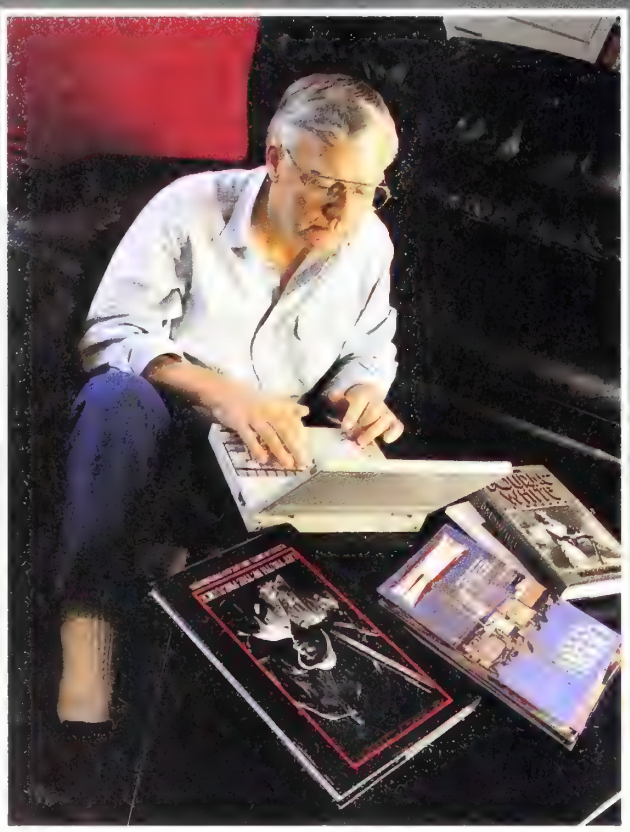
Today's affordable notebook computers mean going to work doesn't always have to mean going to the office. Subnotebooks weighing less than five pounds can even be thrown in your knapsack.

INFORMATION

Start surfing the Internet and you can talk to people from around the world about whatever strikes your fancy, whenever you like. Other on-line services give you the latest news, stock prices, and weather updates.

RONALD E. COMPTON

SOME CEOs ARE TECHNOPHOBES, BUT AETNA'S CHIEF WOULD BE LOST WITHOUT HIS LAPTOP. IT'S HIS DATEBOOK, PHOTO ALBUM, AND MOVIE CRITIC



He prints his own checks by computer. He orders chinos from Land's End Inc. and classical CDs via an on-line service. He prefers hotel rooms with an extra phone line for his laptop. He regales visitors about a 60,000-byte Lotus 1-2-3 macro program he wrote in one weekend. He confesses to checking his e-mail every two minutes.

In a world where many CEOs still regard computers as tools their subordinates use, Ronald E. Compton, chairman of Aetna Life & Casualty Co., is a hands-on guy. He's on his sixth laptop, a Compaq Lite 4/25c, having worn out five in 10 years. He never travels without three spare batteries, a portable fax, and his "road warrior" kit of couplers and connectors. "People think I'm crazy," he says.

Maybe not. Compton, 61, has learned the pluses of a PC at work and play. "It's my version of a pencil, paper, calculator, calendar, and typewriter rolled into one," he says, tapping keys as he looks for a collection of his photographs on disk. He caught the computer bug in the early 1980s when he bought PCs for the Aetna subsidiary he ran.

These days at Aetna, you communicate by computer—especially to talk to the CEO. He calls the computer "the best communication instrument since papyrus. For a lot of communication, it's even better than face-to-face, because of the clarity and precision you get in writing." And he answers all of the hundreds of Microsoft Mail messages he gets from subordinates each week.

He also uses the computer for personal purposes. A movie buff, Compton can't see many flicks because of his hectic schedule. So he downloads reviews and asks his wife, Nancy, to check out the films at the video store. He communicates by e-mail with the Hartford performing arts center, where he chairs a capital fund drive. He has used Intuit Inc.'s Quicken software to keep track of his personal finances since 1985.

Not everything in Compton's life is electronic. He still carries around two calendars—one for business appointments and another for his weekend leisure schedule. As Compton is quick to point out, however, the calendars are printouts from his computer.

By Chris Roush in Hartford

a CD-ROM was, learned to analyze the quality of monitors, and had a fairly good sense of what she needed.

Her next step, though, departed from common practice. "I really didn't know anything about how to set one up," says Silverman. "I went to Staples, I talked to a real nerd there, and I decided that what I needed most is someone nearby who I could call on whenever I needed." Her nervousness won out over the mail-order price wars and the discounts, bundles, and deals offered by every manufacturer and computer store in town. Instead, Joan turned to a small, independent local dealer—you can still find them in almost any town. Joan ordered a custom-assembled unit based on an Intel 486DX processor and featuring a superVGA monitor, dual speakers, a CD-ROM player, Windows 3.1, and all kinds of software. The hardware cost her $2,475, several hundred dollars more than a comparable mail-order machine. The extra money bought the security of having the dealer come over, set the machine up, spend hours showing her how to use it, and more hours on the phone with her. Silverman enjoys the personalized service but also realizes now that she knew more than she realized. "It's not as scary as I thought it would be," she says. "In fact, I'm really getting into it. I love all the games."

A desktop PC allows you to bring your office home. A laptop lets you take your work anywhere (page 170). Portable computers have gotten smaller, more powerful, and cheaper—though for the same amount of computing power, a notebook computer will still set you back a good bit more than a desktop. But if you're willing to pay up to $5,000, you can get a six-pound unit that features a brilliant color display, key-

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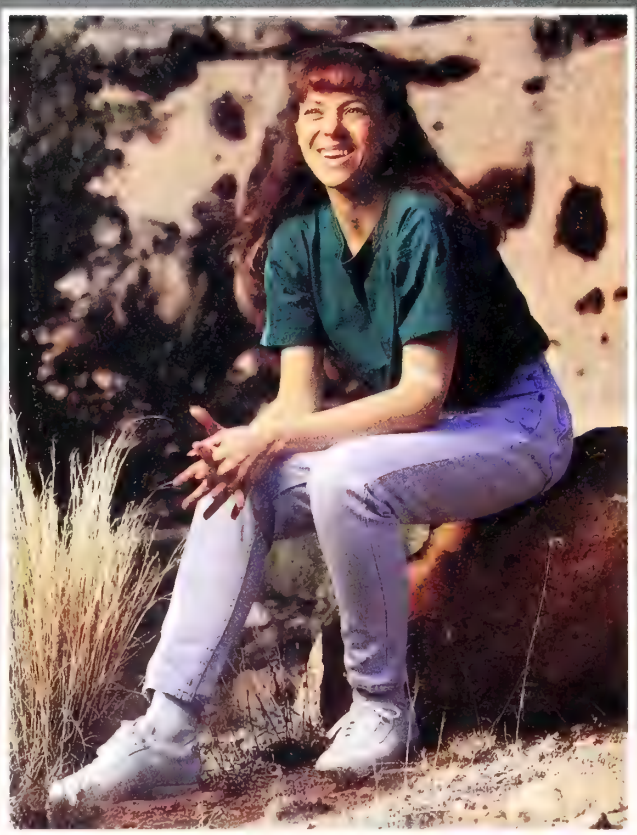
AMY C. ARNOTT

BOY, THAT'S SOME DAILY COMMUTE—LOS ALAMOS TO CHICAGO. EXCEPT THIS ANALYST IS MAKING THE TRIP VIA A DELL 386. THE BEST OF BOTH WORLDS? WELL, SHE HAS TO FORFEIT THE WATER-COOLER GOSSIP



DOUGLAS MERRIAM

When Amy C. Arnott's fiancé was offered a job with Los Alamos National Laboratory in New Mexico last fall, the analyst with Chicago-based Morningstar Inc. feared she'd have to choose between husband and career. Instead, she found a high-tech solution: Since last October, she has been telecommuting from a home office in her Los Alamos condominium. Arnott is the second Morningstar analyst to telecommute, although the other is in New York, which makes sense for someone writing about investments. "Los Alamos isn't exactly a world financial center," Arnott says.

Arnott, 25, is at her Dell 386 computer by 7 a.m. Mountain Time, about when her Chicago colleagues begin their workday. She calls into Morningstar's Chicago network to pick up messages using Lotus Development Corp.'s cc::Mail before beginning work on the funds she covers. A CD-ROM, updated monthly, gives her instant access to Morningstar's mutual-fund database, including performance numbers, portfolio listings, and biographies of fund managers. A new Morningstar scanning system will give Arnott on-line access to annual reports and other documents.

Arnott interviews portfolio managers by phone and writes reports on her computer, sending them by e-mail to an editor in Chicago. Edited versions are sent back to her by fax.

Were it not for her 505 area code, outsiders would never suspect she's not in Chicago. Arnott's Chicago colleagues are aware of her location, however, and a few hint about taking New Mexico vacations. Arnott herself has taken advantage of her new location by enrolling in a dance class in nearby Santa Fe and learning to ski at Taos, an hour away.

Working at home has its drawbacks. Arnott misses sharing ideas with co-workers, although she insists the isolation keeps her independent. Then there's the question of whether working remotely will hurt her career in the long run.

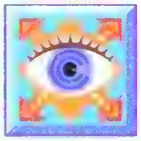
Her boss, Morningstar editor John A. Rekenthaler, is pleased with the arrangement. In fact, he's considering a request from a third employee who wants to telecommute. But after that, he'll declare a moratorium. Somebody has to mind the store.

By Sandra Atchison in Denver

beyond its original academic audience. So far, in fact, that Internet junkies are full of stories about all the virtual sex going on at all hours on adult bulletin boards. But safe sex isn't the only lure of the Internet. In February, the very proper *New York Times* wedding announcements page, usually filled with information about the beloveds' lineage, had this to say about newlyweds Pamela Sue Chasek and Langston James Goree VI: "[The bride] and the bridegroom met through electronic mail on the Internet, the international data network." The couple has since gone on, by the way, to create their own newsletter to distribute on the Internet, *Earth Negotiations Bulletin*. So just think of the changes that could be wrought in your life if you had a computer.

Once you've gone this far, there's no going back. If you're going to have a computer as a traveling companion, you might want to add a cellular phone, a portable fax—maybe even one of those new personal digital assistants (page 176). Before you know it, you'll have become a card-carrying Information Revolutionary. □

BUT FIRST, READ THE BOOK



Anyone who still thinks computers will eliminate paper hasn't visited a bookstore lately. If the current explosion of high-tech titles continues, there soon may be no room on the shelves even for cat books or diet guides.

The quality of computer books has improved along with the quantity. There are volumes on every topic—and for every user, from the neophyte who finds the manuals supplied with software and hardware hopelessly confusing to the power user who finds the official information in the manuals hopelessly inadequate.

Publishers sort computer books into series, each aimed at a different audience. For tyros, it's tough to beat the "for Dummies" series from IDG Books. Starting with Dan Gookin's *DOS for Dummies* and Andy Rathbone's *Windows for Dummies* (each $16.95), IDG now offers dozens of yellow-jacketed titles covering virtually every computing topic. Although they sometimes suffer from excessive cuteness—a problem endemic to computer writing—the "Dummies" books offer a wealth of information in palatable form, with clear examples and helpful illustrations.

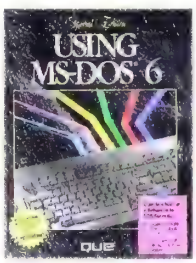
Other publishers aim at a somewhat more advanced audience. Que's "Using" series, such as *Using Microsoft Word* ($29.95), is a good example. A few years ago, books of this sort were essential to understand most programs, since the manuals supplied with the software were often all but incomprehensible. The quality of documentation has improved greatly, but there's still a role for books that cover essentially the same material as the manuals, since they often do it in a more understandable and better-organized fashion. In addition, perusing one of these volumes can give you a good idea of the capabilities and quirks of a program that you are considering buying at a fraction of the cost of bringing home the software.

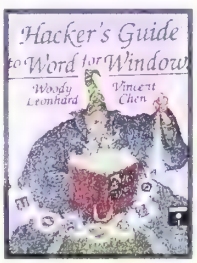
Then there are the hefty tomes aimed at people who want to know everything about their programs. These books, usually authorized by the software publishers, go into more depth than software manuals and often are accompanied by disks or even CD-ROMs. Good examples include Microsoft Press's volumes on various Microsoft applications (most $24.95) and Osborne/McGraw-Hill's "Complete Reference" series, such as the *WordPerfect 6.0 Complete Reference* ($29.95).

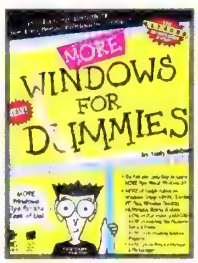
One step beyond are those books that give you information that the software publishers don't particularly want you to know about. Woody Leonhard and Vincent Chen's *Complete Hackers Guide to Word for Windows* (Addison-Wesley, $39.95) is a compilation of every known trick, bug, and quirk in the Version 2 of the leading word-processing software. (An edition that covers Version 6 is forthcoming.) Despite the intimidating title, the *Hacker's Guide* is intended not for programmers but for the experienced Word user who wants to get the most out of the Microsoft application. And Leonhard and Barry Simon teamed up for a similar dissection of Windows in *The Mother of All Windows Books* (Addison-Wesley, $39.95 with disks, $49.95 with CD-ROM).

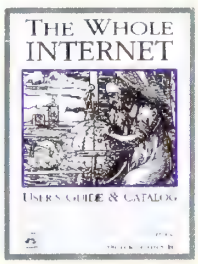
Finally, the recent popularity of the Internet has generated its own flock of books. One of the earliest and still one of the best nontechnical explanations of the mysteries of the Internet is Ed Krol's *The Whole Internet* (O'Reilly & Associates, $24.95).

By Stephen H. Wildstrom









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MORE BANG, LESS BUCK

Office systems are getting so powerful, so fast that it's hard to go far wrong. But you have to take the search one component at a time—and ask tough questions at every step

BY PAUL M. ENG

Fifteen years after the explosion, the shock wave is still rolling through the workplace. The development of the Intel 8088 microprocessor, the heart of the original IBM Personal Computer, has redefined work. The 100-page business plan that had to be retyped with each revision and the loan that was painstakingly calculated from amortization tables are nothing but dim, bad memories.

The revolution isn't over. It's not even slowing down. Three years ago, your company paid $3,000 to put a speedy new PC based on an Intel 80386 chip on your desk. Now it's a silicon relic. Today, mainframe processing speed is commonplace in desktops. Larger, more energy-efficient color monitors and cheaper, faster laser printers offer a wealth of new power. The major problem facing today's buyer may be an embarrassment of riches.

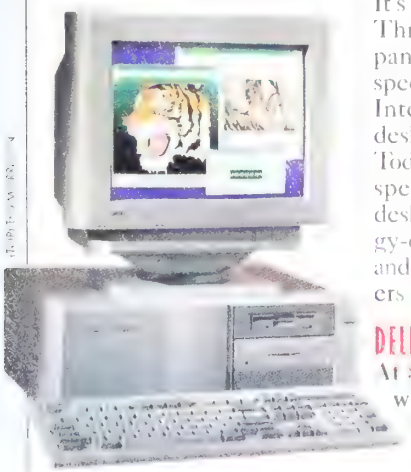
Perhaps the most critical choice you will make is also the most technical: which microprocessor to use. In the more than 90% of office machines that run either the older Microsoft Windows 3.1 or the new, high-powered Windows NT, you basically have two choices: the Intel 486 (including clones from Cyrix and forthcoming versions from Advanced Micro Devices and Texas Instruments) or its successor, the Pentium.

The 486 powers the vast majority of PCs sold today. Intel has extended the life of the three-year-old processor by finding ways to speed up its internal clock, which governs how quickly the chip can execute instructions. The original 486DX offered a maximum clock speed of 50 megahertz (millions of cycles per second). The latest 486DX4, just now hitting the market, hums at 100 Mhz.

Clock speed alone, however, can be a misleading guide to performance. Designers of the Pentium used a variety of tricks to increase its power. Result: Tests by National Software Testing Laboratories/McGraw-Hill Inc. (a sister company of BUSINESS WEEK) found that a machine based on a 60-Mhz Pentium can perform at up to three times the speed of a 66-Mhz 486DX2—and probably twice as fast as a 100-Mhz DX4, which was not available in time for the comparison.

But Pentium machines from Dell Computer, Compaq, IBM, and other vendors can easily cost a third more than a comparably equipped fast 486. Most of the Pentiums sold to date are destined for use as file servers—the high-speed systems that run office networks—or for the desktops of designers, engineers, and others who need a lot of computing power. Now prices are beginning to drop, especially as Intel faces competition from the new PowerPC chip developed as a joint venture of Apple, IBM, and Motorola. That means more and more Pentiums will be turning up on executive desktops.

The performance of a system depends on more than the speed of its processor. Other factors are the data-retrieval speed of the hard-disk drive, the amount of random-access memory (RAM), the electronics driving the video



DELL DIMENSION XPS P-90
At $3,299, the system with the lowest entry fee to the fastest Pentium chip

COMPAQ DESKPRO XL
Speedy circuitry for even faster video, at a pricey $1,400 (monitor extra)

display, and the circuitry that all these components rely on to communicate with one another. Of these, RAM—the memory in which the computer actually computes—may be the most important. Many Windows machines are sold with 4 megabytes of RAM, the minimum recommended by Microsoft Corp. But for all but the simplest tasks, 8 megabytes are needed to avoid sluggish performance, even with a fast processor. In fact, experts say, many users are dissatisfied with the performance of Windows software usually need more memory, not a faster machine.

In Windows machines, the circuitry responsible for the video display is often the real speed bottleneck; the chore of moving a circle from one corner of the screen to another, for instance, can involve millions of calculations. One of the units that performed best in NSTL's review was the Compaq DeskPro 5/60M. It scored impressive marks in video capabilities, thanks to its proprietary system, QVision. And its three-year warranty on parts and labor is one of the industry's most generous.

NEC MULTISYNC 6FG

The high-quality 21-inch monitor was rated tops in its class. List: $2,535

Newer machines offer even faster video. Compaq recently announced a new version of its DeskPro called the XL, which uses Intel's speedy PCI circuitry for even faster video. It also sports a fast CD-ROM drive as well as Business Audio, a multimedia feature that allows users to attach voice-annotated messages to files. This strong performance carries a steep price: The DeskPro XLs fetch about $4,400, monitor extra. IBM's ValuePoint P60/D costs $4,199 without CD-ROM or monitor.

Gateway 2000 Inc., a big direct-mail seller, offers a cheaper route to a multimedia Pentium. Its P5-90 is built around Intel's fastest chip—a 90-Mhz Pentium—and includes a CD-ROM drive and a big 17-inch color monitor for a mere $3,995. Dell Computer Corp.'s Dimension XPS P-90 also uses the 90-Mhz version of the Pentium and features an enhanced hard-drive controller to handle up to four hard drives. Priced at $3,299, it's the cheapest Pentium system available.

The latest, greatest Pentium may make a nifty executive status symbol, but do you really need all that power? If you are doing high-resolution graphics or running a complicated mathematical model, you need all the speed you can get. But if you spend most of your computer time writing letters or reports with a word processor or reading and writing e-mail, your fingers can only fumble over the keyboard so fast. And the time a database search takes will probably be set more by the speed of your network and the rate at which your

THE TRADE-OFFS OF TWO SPEEDY CHIPS

PENTIUM PCs

Intel's Pentium chip promises computing power up to twice that of its predecessor, the 486DX2–66Mhz microprocessor. Its speed makes it particularly appropriate for such uses as computer-aided design and drafting, voice recognition, and 3D modeling. Occupations where the Pentium may be worth the extra money include engineering and scientific research. Here are some appealing candidates:

Make/ Model	Street price	Features
COMPAQ DeskPro XL 566	$4,400*	Built-in networking capabilities, a double-spin CD-ROM drive, and can play and record voice-annotated memos. Monitor optional
DELL Dimension XPS P-90	$3,299	Lowest-priced Pentium system, with enhanced hard-drive electronics to speed data on their way to the Pentium
GATEWAY 2000 P5-90	$3,995	Comes with a double-speed CD-ROM drive and large 17" monitor
IBM ValuePoint P60/D	$4,199	Very large hard drive and 16 megabytes of memory. Monitor optional

*Compaq's estimated price

486 PCs

Factors other than the central processor affect the speed of a machine, so certain applications may not run appreciably faster on a Pentium machine. And if a particular program isn't geared for Pentium, the user might not notice a difference. So far, for example, word-processing programs run just as fast on a 486-based PC, particularly if the chip has been enhanced to run faster. A sampling of souped-up models:

Make/ Model	Street price	Features
AST Premmia 4/66D Model 343M	$3,847	Has a 486DX2 microprocessor, full multimedia capabilities, and loads of software
IBM MVP	$2,964	Sound card and double-speed CD-ROM and 15" monitor complement a 486DX2 microprocessor
GATEWAY 2000 P4D-100	$2,495	Uses the top-of-the-line 486DX4 chip and comes with a double-speed CD-ROM drive, and 15" monitor
DELL DIMENSIONS XPS	$2,699	486DX4 chip with 8 MB RAM, 450 MB hard drive, double speed CD-ROM, 15" monitor

DATA: BUSINESS WEEK, COMPANY REPORTS

TED MOSER SON

hard drive can pump out data than by the raw firepower of your microprocessor.

That is why many users who don't need to be on the cutting edge of desktop technology may enjoy significant savings—perhaps $1,000 on a system—by settling for a computer powered by one of the updated 486 processors. For example, IBM offers the ValuePoint 486DX2/66 with a 15-inch monitor for $2,649. Adding a multimedia kit with sound card and a double-speed CD-ROM for only $315 more will give you what IBM calls an MVP PC. But even souped-up 486 PCs can become a bit pricey. AST's Premmia 4/66D Model 343M is powered by a 66-Mhz 486DX2 and offers full sound-and-graphics capability for $3,347. Add around $500 for a high-quality 15-inch color monitor, and you have a system that can create multimedia presentations.

The choice of a processor and system unit is only the beginning of your shopping. In many ways, the monitor is your most critical choice. While it's hard to tell by looking what sort of processor a computer uses, a bad monitor can become—literally—a daily headache.

Buyers have to consider two major factors when choosing a monitor, either as part of a system or as a later upgrade: screen size and image quality. Many systems come bundled with a 14-inch display. (Monitors, like TV sets, are measured diagonally. The actual size of the screen is almost always an inch or so smaller than the stated size.) Windows users, however, are finding that 15 inches is more practical, and many are beginning to opt for 17-inch units. For heavy-duty desktop publishing or graphics work, a 20-inch monitor is highly desirable.

Make sure your printer speaks the right "language"

The size of a monitor is closely related to the confusing issue of screen resolution—the number of dots, or pixels, that a display can show. The higher the resolution, the more information you can cram onto a screen. For example, on a screen 800 pixels wide by 600 pixels high (the so-called SuperVGA resolution), Microsoft's Excel can display 27 rows and 12 columns of a spreadsheet. At 1,280-by-1,024 resolution, Excel can show 49 rows and 19 columns. But when using Windows on anything much smaller than a 20-inch monitor, the highest resolution may produce characters too small for most users to read without strain.

Before you decide you need the biggest monitor available, consider some potential problems. A 21-inch unit will set you back more than $2,000. You'll need to sit a good distance from the big screen to use it comfortably. And you won't want to plunk down its 70-pound heft just anywhere.

Monitors vary considerably in image appearance. A good display should have a nearly flat screen and minimal distortion. Circles should look round and squares square, and make sure the image is sharp across the entire display area. An etched-glass face on the picture tube will cut down on glare, but at the cost of a slight loss of sharpness and brilliance. Above all, beware of flicker, a sometimes all-but-imperceptible jumpiness of the display that can cause eyestrain and headaches. "Noninterlaced" monitors are less prone to flicker than less-expensive "interlaced" units.

NSTL did exhaustive lab testing of more than 70 monitors ranging from 15 to 21 inches. While quality varied, all were judged acceptable. The units judged highest in quality in each class were the 21-inch NEC 6fg ($2,535), 17-inch Nanao F560i-W ($1,499), and the 15-inch Zenith ZCM 1540-ut ($549).

Lab tests can get you only so far, however. Much in the choice of a monitor is subjective. And shopping is made difficult by the fact that many units are twins under the skin—five manufacturers make most of the picture tubes used in monitors. For example, Nanao's F560i-W uses a Toshiba tube, while the otherwise nearly identical (and almost as highly rated) F560i is equipped with a Sony Trinitron. In the end, the soundest advice for buying monitors may be to buy the best and biggest you can handle, take your time, and trust your eyes.

Your other critical decision about an accessory is the choice of a printer. Nearly everything that is produced on a computer will end up on paper sooner or later, and one of the main virtues of computers is their ability to pro-

HEWLETT-PACKARD 4si
The brawny LaserJet MX will spit out 11 pages a minute. List: $5,499

THE OFFICE CHOICE: LASER PRINTERS

A laser printer for the office should be a workhorse—and these fill the bill. If you want the finest control over text and graphics, go for a unit that uses Adobe's PostScript language. Most office machines can also be connected directly to a network for easy sharing.

Manufacturer/ Model	List price	Features
HEWLETT-PACKARD LaserJet 4	$1,829	Latest version of an old reliable
LEXMARK IBM 4039 12R	$1,999	High-end performance at a midrange price
TEXAS INSTRUMENTS Micro Laser Pro 600	$1,599	Easily set up to work with Macintoshes

DATA NATIONAL SOFTWARE TESTING LABORATORIES/McGRAW-HILL INC., BUSINESS WEEK

SYBASE

THE WORLD CUP.
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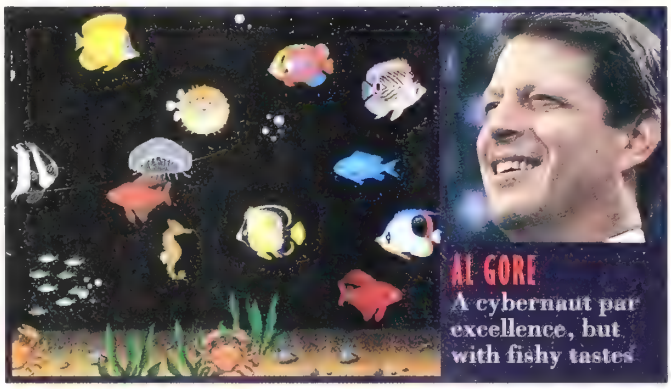
(We'll also send you a free 24"x 36" copy of this World Cup poster.)

duce great-looking reports, letters, and other documents. While even a few years ago, computer printouts were synonymous with the ugly output of dot-matrix units, today the clean, quiet laser printer has become the office standard. And while the biggest, fastest machines are most suitable for shared use on networks, low-cost units bring laser printing to the desktop with no sacrifice in quality.

Printer prices have fallen dramatically in the past couple of years. A laser printer, which uses the same xerographic process as a copier to fuse dry ink on plain paper, can go for as little as $500.

There are several important factors to consider in choosing a printer for the office. Your choice should support at least one of the two leading methods that computers use to feed text and graphics to laser printers—Hewlett-Packard Co.'s PCL5 page-description language or Adobe Systems Inc.'s PostScript. Windows can use either, as can most major word processing, graphics, and desktop-publishing programs. PostScript printers provide more precise printing, especially in images using shades of gray. But they are more expensive and generally require more memory to perform at their best. The best printers will switch automatically be-

MAP OF THE STARS' SCREENS



Back in the early days of personal computing, when monitors still glowed green, pioneering users discovered a problem: If the same image stayed on the monitor for too long, it "burned" into the screen's phosphor coating and became a permanently visible, ghostlike image. The solution was simple: a little program that would fill the screen with a varying pattern after the computer had been idle for a while.

Little did the programmers of these "screen savers" realize they were creating a software industry. Even though burn-in has ceased to be a problem on today's color monitors, screen savers—witty, amusing, or calming—have become a craze among computer users. According to market researcher International Data Corp. in Framingham, Mass., the screen-saver market will top $180 million by 1997, up $80 million last year.

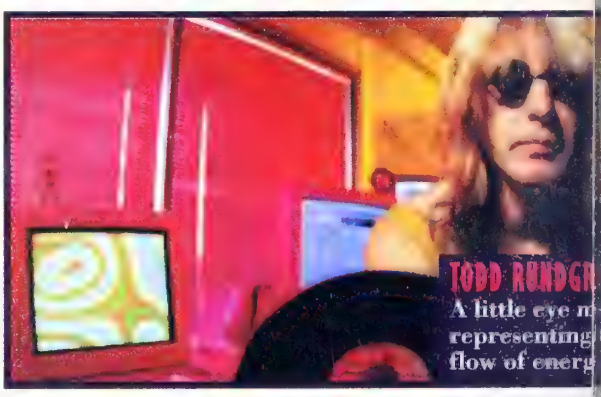
Berkeley Systems Inc.'s After Dark ($29.95 for DOS, Windows, or Macintosh) has long dominated the market with its "Flying Toasters" and simulated aquarium. But Ann Stephens, a retail analyst with Reston (Va.)-based PC Data Inc., says at least five other companies offer commercial screen-saver software. "I think you're going to see a lot more people enter," she adds. The reason? It's a lucrative business for software makers such as Berkeley Systems which, according to Stephens, is the industry's 18th-largest company in dollar volume. "Thirty percent of new game sales occur in the first 30 days they are out on the market, [but] screen savers [sell] well throughout the year."

Perhaps one reason for screen savers' popularity is that they represent a way for users to express their personalities on machines that many consider somewhat dehumanizing. Certainly the choice of images can say a lot about a user. Consider some of the screen savers of the rich and famous:

The Computerized French Chef. It may or may not come as a bit of a surprise, but Julia Child is as comfortable working with a PC as she is with a wire whisk. "Most of my life is spent writing, so computers have been marvelous," says the self-proclaimed 20-year PC veteran. In fact, when she last tried to write a freelance article using a typewriter, she found it so cumbersome. "I thought I was going nuts," recalls the 82-year-old master chef.

However, Steve Tougas, a computer consultant who helps her with her home system, says she doesn't think about her machine much. Her choice in screen savers is simple: "I'll be back" scrolls across her screen in bright fuschia letters. The screen saver, much like the "Flying Windows" screen saver that comes as part of Microsoft Windows, reflects her attitude that technology shouldn't draw attention to itself. For example, Child may turn to a blowtorch to caramelize crême brûlée for show but because it does the job simply and efficiently.

The Electronic Opus. Berkeley Breathed, creator of the nationally syndicated comic strips *Bloom County* and *Outland*, won't settle for mere functionality. Although he has been a fan of Apple Macintosh computers—long known for their "cool



een the two languages. With more than 10 years' perience turning out laser nters, it's no surprise that continues to dominate the rket with its LaserJet 4 se-s, which took top prize in st of NSTL's printer tests. o versions designed for in-idual use, the $1,839 serJet 4 and the $1,229 4P, turn out crisp pages at 600 dots per inch. That fine resolution makes them suitable for printing halftone images, such as scanned photographs. The difference: The 4P prints at four pages per minute, half the speed of its big brother. If you're looking for a heavy-duty printer to serve a group of users on a network, the LaserJet 4si MX is the champ. It will spit out page after page—at the rate of 11 per minute.

Today, for about $5,000—and a good bit less if you're willing to make a few compromises—you can buy an office computer that would make the systems manager of a decade ago drool with envy. While the choices are many and confusing, the good news is that the average quality of computers, monitors, and printers has gotten so good that it's difficult to go seriously wrong. □

1985, the 37-year-old cartoonist laments: "There fun out there."

Toronto-based Delrina Corp. asked Breathed to help ew screen saver, he leapt at the chance. The result-Bill Screen Saver ($39.95) is more entertainment software. Featuring Opus the penguin, Bill the Cat, *Outland* characters, Opus 'n' Bill pokes fun at the com-try and pop-culture icons using cartoon animations. on had Opus shooting down winged toasters—a di-ent on screen-saver silliness. A lawsuit by Berkeley ming that the use of flying toasters infringed on its orced Delrina to tone down the parodies. But, says That's what animation is. It's got to be funny."

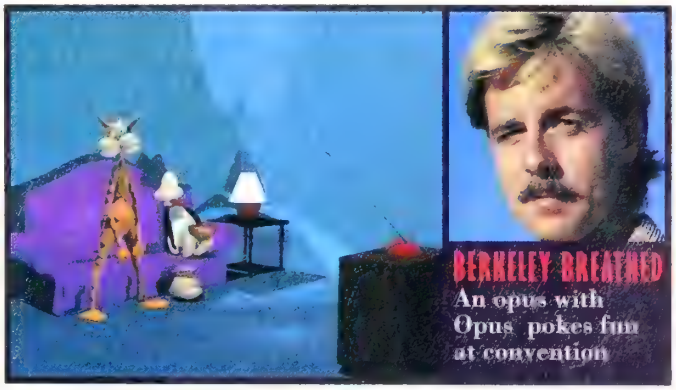
ic. Some creative types expect humorous screen ow tiresome quickly. "You're not going to be long," says Todd Rundgren. So instead of bouncing windows, or a penguin shooting down flying toasters, -old musician developed a program called Flow Fazer, his own use.

describes the program as "music for the eye." Its erns of varying color intensities represent "the flow of naturally occurring electromagnetic interactions. In s, the colorful patterns graphically show how magnet-es between the opposing "north" and "south" poles . Rundgren says he and programming partner David nally created Flow Fazer "as a philosophical and artistic statement." But the musician, who has six Macs and a Silicon Graphics Inc. workstation in his San Francisco studios, says the patterns are therapeutic. "You can put this on and chill out," says Rundgren.

Flow Fazer could soon be available as commercial software. Its recent unauthorized use in an MTV *Beavis & Butt-head* music video may help it find a market beyond the musical underground. And while the artist laments that it may have taken something as juvenile and commercial as *Beavis & Butt-head* to make Flow Fazer successful, Rundgren jokingly suspects that the only folks who will buy it are "the same people that enjoy psychedelic drugs."

The High-Tech Veep. Al Gore's finesse with personal computers and associated issues is already a legend in Washington and throughout cyberspace. The Vice-President has made upgrading information technology a centerpiece of his "reinventing government" recommendations, and Gore has taken on the construction of a "National Information Infrastructure" as a personal project. In fact, Gore is enough of a propeller-head to have the honor of being the first Vice-President to hold a live "electronic town meeting" on CompuServe back in February. And what shows up on Gore's screen when the Vice-President isn't busy reading his e-mail? It's just "a little aquarium with fish."

By Paul M. Eng in New York, with Edward C. Baig in Washington and Ruth Coxeter in New York



CHILD BY IRA WYMAN, SYGMA. BERKELEY BY JODY BOYMAN

SUITE SIMPLICITY

Buying just a word processor is old hat. Bundles of software now offer better file integration—and irresistible prices

When it comes to choosing software, there's good news and bad news. The bad news is that unless you are self-employed, the need to match your personal programs to your software at work means that you often have no real choice. The good news: Today's leading software is so capable it's hard to err.

Most users spend the bulk of their computer time using a word processor. In the world of Microsoft Windows, the word processing market is dominated by three best-sellers: Microsoft Word 6.0, Ami Pro 3.01, and WordPerfect 6.0. All can handle everything from a letter to a multichapter book and can turn out designs that once required powerful page-layout programs. All of them include tools to automate the design of documents.

It's becoming rare, though, for anyone to just go out and buy a word processor. That's because publishers are bundling word processors with other programs in irresistibly priced "suites." For example, the top-selling package, Microsoft Office, includes Word, the Excel spreadsheet for number-crunching, and PowerPoint, for turning your text and data into presentation slides and charts. Discounted, these programs would cost over $900 bought individually. But the suite can be had for $460—or just $229 if you upgrade from an existing version of any of the component programs. An extra $100 buys you the professional version, which includes a copy of Microsoft's Access database manager. Obviously, if you can use even two of the products in a suite, buying the package makes sense.

Price is only one reason for buying a suite. Any pair of properly designed Windows applications should be able to work together. You can paste data or a graph from a Borland Quattro Pro spreadsheet into a Microsoft Word document. But this integration is often easiest with products that were designed to work together. For example, Microsoft Word features a "button" that starts up Excel without going to the Windows "desktop" first. It could be modified to start Quattro Pro instead, but this requires a bit of programming skill. Suitemates also offer the user a consistent screen design and set of tools and menus that make it easier to move among programs.

Microsoft Office is the best integrated of the three major packages, since the components were designed from the ground up to look and work alike. But Lotus SmartSuite is also a tightly integrated, heavyweight contender. It includes Ami Pro, the Approach database, the 1-2-3 spreadsheet, Freelance Graphics for slides and charts, and Organizer personal-scheduling software.

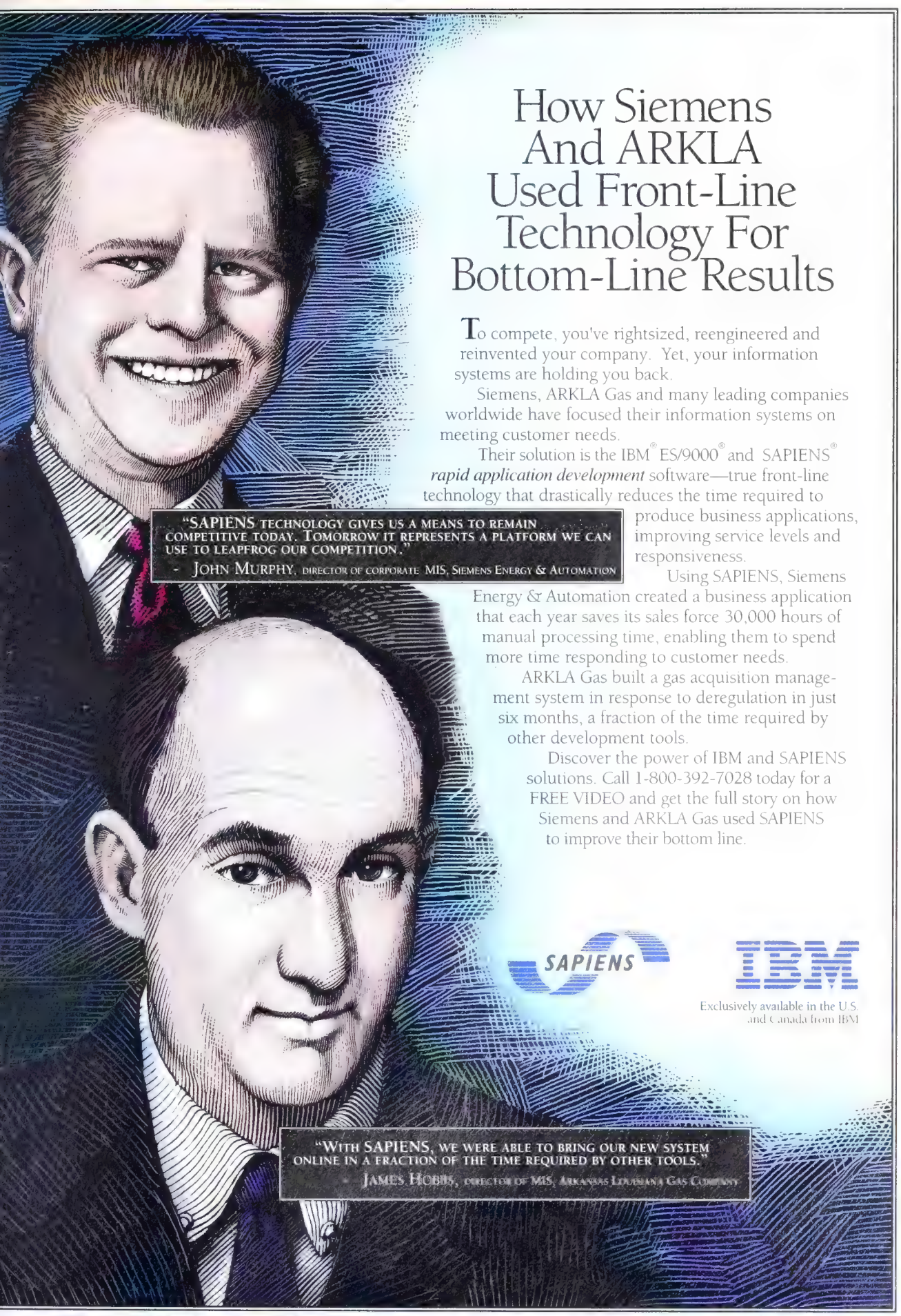
Borland Office, combining Quattro Pro and Borland's Paradox database with WordPerfect, began life as a group of products thrown together to give Borland International Inc. and WordPerfect Corp. a suite entry. With Version 2, the partners began integrating the products. But now major changes are in the works as a result of the announced acquisition of both WordPerfect and Quattro Pro by Novell Inc. For one thing, the suite will get a fresh, yet-to-be-determined name. "We'll clearly identify it as a WordPerfect product," says Glen Mella, WordPerfect marketing vice president. "A single vendor suite will convince a lot more users."

Your choice of a suite should be based on the program you use most—and designed to minimize file conversions when going from office to home. While all the major programs can read each other's files—for example, you can handle a Word document in WordPerfect or a 1-2-3 spreadsheet in Excel—the conversions are slow, and some of the fine points of formatting may get lost along the way.

By Stephen H. Wildstrom

VIEW FROM THE TOP: SIZING UP THE SUITES

	Microsoft Office	Lotus SmartSuite	Borland Office
WORD PROCESSOR	WORD 6.0	AMI PRO 3.01	WORDPERFECT 6.0
SPREADSHEET	EXCEL 5.0	1-2-3 RELEASE 4.01	QUATTRO PRO 5.0
GRAPHICS	POWERPOINT 4.0	FREELANCE 2.01	NA
DATABASE	ACCESS 1.1	APPROACH 2.1	PARADOX 4.5
INFORMATION MANAGER	NA	ORGANIZER 1.1	NA
E-MAIL	MICROSOFT MAIL	NA	NA
STREET PRICE	$569	$459	$389



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- JAMES HOBBS, DIRECTOR OF MIS, ARKANSAS LOUISIANA GAS COMPANY

HOME IMPROVEMENT

You can't live without one at work, and your kids are hooked on them at school. Now computers are housebroken—capable, a cinch to use, and exceedingly affordable

BY PAUL M. ENG

Ever since Apple Computer Inc. introduced the Apple II in 1977, computer makers have been dreaming of a mass home market. But even as personal computers sprouted on almost every office desk, Mom and Dad just didn't see the advantage of buying something as frustrating as IBM's PCjr or as pricey as Apple's first $1,495 Macintosh.

A combination of familiarity gained at work and school, improvements in ease of use, and, above all, plunging prices is winning the personal computer a prominent place in the home. Computer makers are responding to the new market by offering "multimedia" packages that include factory-installed sound systems and CD-ROM drives, so you'll be ready to use the latest entertainment and educational software as soon as your machine comes out of the box.

But while the manufacturers are trying to make life easier for experienced customers, home-computer buyers still face a plethora of confusing choices. The most fundamental question is whether to go with an IBM-compatible machine that runs Microsoft Windows software or an Apple Macintosh. Macs (page 162) still have an edge in ease of setup and simplicity of use, but because of the need for compatibility with computers used in the office, the availability of software, or price, the overwhelming majority of home buyers opt for Windows machines.

Once that basic choice is made, you have to select your microprocessor. As recently as two years ago, most machines sold for the home came equipped with Intel Corp.'s now-discontinued 80386 microprocessor. But high-quality sound and graphics demand a lot from a processor, and relatively speedy chips such as Intel's 486DX2 have become the norm. Such a machine offers all the power you'll need for everything from a financial-model spreadsheet to a hot game such as Virgin Interactive Entertainment's The Seventh Guest.

You won't go wrong choosing a multimedia machine from any major vendor. IBM, AST, Dell, Compaq, Packard Bell, and others all sell units featuring state-of-the-art microprocessors, extra-large hard drives, vast amounts of random-access memory (RAM), and a multimedia setup that includes a CD-ROM drive, sound card, and speakers (table). The key concern for the buyer is less the hardware itself than the software that is bundled into the package and—most important—the

STANDOUTS IN HOME MULTIMEDIA

They may be computers to you, but the music and image capabilities make them game machines for your kids. Whatever you call them, multimedia computers are versatile performers. Witness this sampling:

Make/ Model	Street price	Features
AST Advantage! Adventure 486DX2–66mt	$2,699	Integrated electronics allow the PC to act as a phone voice-mail system and family memo center
COMPAQ Presario 800	$1,649	Powered by an Intel 486DX2, it includes a CD-ROM, sound card, and choice of business or home software
DELL Dimension 450 SV	$1,999	Complete multimedia machine with double-speed CD-ROM, SoundBlaster audio, and speakers
GATEWAY 2000 4DX2–66Family PC	$1,995	With an Intel 486DX2–66 Mhz brain, a double-speed CD-ROM drive, and choice of software, it's a great value
IBM PS/1 Model 57C	$2,549	Rapid Resume software automatically returns the PC to where you were when you turned it off
PACKARD BELL Legend 2052	$2,199	Navigator software makes the Windows operating system a breeze even for beginners

DATA: BUSINESS WEEK, COMPANY REPORTS

PACKARD BELL LEGEND 2052
Its multimedia setup has CD-ROM, sound card, and speakers

r-sale service and technisupport that the manufacr or dealer can provide to often-befuddled homeputer buyer.

or example, let's look at similarly equipped multidia PCs, the AST Advan-e! Adventure 486DX2-nt and the Gateway 2000 X2-66 Family PC. Both ture a 66-megahertz Intel DX2, a fast CD-ROM e, 8 megabytes of RAM, a built-in modem that als transmission of both a and faxes over a telene line. The Gateway PC, ich is available only ough direct order from its rth Sioux City (S. D.) nt, goes for $1,995, where-the AST machine costs 99 from retail outlets. e AST offers a bigger hard ve and a better monitor, most of the difference in e lies in the software inled and the quality of cusher service and technical port.

n addition to the standard rosoft Windows operating tem, the Gateway Family offers a choice of software kages. For instance, buycan choose a "productivity k," which includes the ular Microsoft Works—a kage that combines word cessing, database, and eadsheet functions—and llection of 700 sic works on -ROM

called World Literary Heritage. A "learning pack" filled with various award-winning educational programs from the Minnesota Education Computing Corp. (MECC) is also available.

The AST computer comes with a much richer collection of software: Microsoft Works, Lotus Organizer, Microsoft's Encarta multimedia encyclopedia on CD-ROM, and a financial planner. What's more, AST ties all the software together with AST Works, which simplifies Windows by assembling programs and files into logical on-screen groupings such as "communications" and "reference."

With hardware becoming more and more of a commodity, other computer makers are also trying to differentiate their products through customized software. Packard Bell's computers, including the Legend 2052 Multimedia PC, and the Presario 800 PCs from Compaq Computer Corp., come with programs similar to AST Works. IBM has taken a different approach in its PS/1 line of home machines. Its Rapid Resume program remembers that you were in the middle of a letter to Grandma when you last shut off the PC and puts you back there the next time you boot up.

Modems are must-haves, but they're going out of style

The manufacturer's service policies—and reputation—are other factors to consider. The days when a significant number of machines were "dead on arrival" when taken out of the carton are mercifully long gone, but things can and do go wrong. Direct-mail vendors can offer the lowest prices, but a few hundred dollars in savings could turn out to be no bargain if you have trouble getting help when your computer doesn't do what you want it to. Gateway 2000, long criticized by customers who have spent what feels like hours on hold on toll-free customer-service lines, is adding more support personnel and 24-hour help lines. But explaining your problem to a technician over the phone can still be a trying experience.

IBM has come up with a solution that it calls Online Housecall. If a buyer's PS/1 is equipped with a modem, an IBM technician can call the machine and remotely diagnose whatever is ailing the computer. Replacement parts can be at your home within 48 hours to fix the problem. Or you can bring the PC to any IBM dealer for service. Gateway 2000 has begun offering a similar feature called CO/Session with its modem-equipped PCs. Most mail-order vendors provide one-year on-site service through national third parties such as Hewlett-Packard Co.—although it sometimes can be difficult to convince a customer-service agent that your machine really is broken.

For nervous first-time buyers, nothing beats talking to a live body. So it might be worth the extra money to purchase a system from a local electronics retailer or a specialized computer superstore outlet such as CompUSA. Not only do you get to kick the tires (and fiddle with

CD-ROM DRIVES

The key to multimedia—but if you're on a budget, you can add one later

AST ADVANTAGE!

Pricier than similar PCs, but comes with a rich software package

PHOTOGRAPH BY TED MORRISON

the keyboard) before you plunk down your $2,500, but you also get to discuss your purchase with a real live sales representative. Many computer stores will also handle repairs and upgrades on-site, sparing you from figuring out your way around the machine's innards.

You should not, however, be terrified of taking off the cover and getting inside the machine. Memory upgrades, for example, come on snap-in circuit boards, and most new computers will automatically reconfigure themselves to use the new RAM. If you're on a tight budget, you might leave multimedia features out of your original purchase and later add an audio board and a CD-ROM drive. Multimedia upgrade kits, such as Creative Labs' $429 Discovery CD 16 and Media Vision Corp.'s $399 Family Deluxe Multimedia Kit, include a so-called double-speed CD-ROM drive, which will spin a disk twice as fast as older CD-ROM drives to pump data off the CD more quickly. And the next generation of CD-ROM drives, such as NEC Corp.'s MultiSpin 3Xp, will spin the CD platter at three times the old rate.

Once you've selected your PC, your next major choice is a printer. Other than playing games, the most important use of a home PC for many buyers is to produce written output, from business letters to school assignments. As recently as a few years ago, cost considerations made the slow, noisy dot-matrix printer, with its jagged characters, the only real choice for the home. But improved technology, competition, and the economies of scale generated by a mass market have brought office-quality printing within the reach of just about any buyer.

Laser printers are clean and quiet, and they produce crisp text and graphics on ordinary office copier paper. Hewlett-Packard, the dominant force in office printers, has two models that are targeted at the home user. The LaserJet 4P can churn out four pages of text per minute (graphics take longer on all printers), and it can print black-and-white photos with near-professional quality. The LaserJet 4P lists at $1,229 but is widely available for less than $1,000. Its baby brother, the LaserJet 4L, offers somewhat grainier printing at a street price of around $700. Lexmark International's similarly priced IBM 4037 5E prints at five pages per minute—speedy for this class.

Inkjet printers, which work by spraying microscopic dots of ink onto paper, offer near-laser quality at lower prices. Early inkjet units required special paper to keep the ink from "bleeding," and the water-soluble inks were unsuitable for some purposes, such as addressing envelopes. Both problems have been solved. And while their output is slower than laser printers—three pages a minute at best—inkjets can offer more flexibility: Many units can print in color.

Canon Inc., which developed inkjet technology, has a top-rated, popular model in the $399 BJ-200e. Its output is very close to laser quality. The $329 Texas Instruments Inc. microMarc offers slightly lower resolution at a bargain-basement price.

Don't expect magazine-quality color reproduction from a color inkjet. Tones tend to be a bit murky, and subtle changes in shade of-

LIKE THEM APPLES?

Do you take adventure vacations? Do you [l]ungroomed ski trails, watch cult movies, w[ear] Birkenstocks, or prefer pineapple on your p[izz]za? In other words, do you like to stand ou[t] from the crowd? If so, you may be ready t[o] join that devoted band of nonconformists: Mac owners.

Apple Computer's Macintosh computers account for jus[t] 10% of the PCs sold around the world, with machines usin[g] Intel-designed processors and Microsoft Windows softwar[e] claiming nearly all of the rest. But the Apple numbers hold[,] year in and year out, testimony to the loyalty of Mac custo[m]ers. Mac prices are down now, but over the years users h[ave] paid a 20% to 40% premium over an IBM-compatible equiv[a]lent. Yet they say it's worth it to get Mac's superior ease o[f] use, multimedia capabilities, and seamless ability to incorpo[rate] data from different applications. Says John Crow, owner o[f] Memory Bank Computer store in Virginia Beach, Va.: "Wh[en] you've got an IBM sitting next to a Mac, only someone wh[o] has tunnel vision would buy anything but a Mac."

That's the sentiment of a Mac aficionado. But reality the[se] days is a tad different. Windows software has closed the e[ase]-of-use gap. And when the new version of Windows, code[-]named "Chicago," comes out at year's end, the distinction[s] shrink further. But for now, there are differences in ease o[f] use and Mac's emphasis on multimedia—the mixing of vid[eo], voice, and data. Most Macs are multimedia-ready. So forge[t] the headaches of installing a sound board and CD-ROM dri[ve]. All this, combined with new, aggressive prices starting at $1,000, make Macs a good bet[] some buyers.

The excitement in the Mac world comes from Power Mac[s]. On Mar. 14, Apple assured cu[s]tomers of future speed and po[w]er with a new line based on the PowerPC microprocessor. Thi[s] new chip, using speedy reduce[d] instruction-set computing (RIS[C]) technology, is the product of [a] joint venture betwe[en] Motorola, IBM, an[d] Apple.

The Power Macs, whic[h] start around $1,800, are [up] to eight times faster than current Macintoshes when running software w[rit]ten for the new chip. Power Macs als[o] run existing Mac programs, though w[ith] less of a speed advantage. And buyers [of] older models can easily upgrade to P[ow]erPC for $700 to $2,000. Says Tim B[a]

MACINTOSH DUO SYSTEM

Plug the laptop into a docking station, and it's a desktop

sident of Creative Strategies Re-
International: "Apple finally has a
advantage."
hose who remain unconvinced,
more. In the past year, Apple
en the risk out of choosing be-
Mac and Windows by offering
es that run both. The Quadra
DS Compatible handles Windows
ic software at a cost of $1,600.
wer Macs also can be switch-
SoftWindows by Insignia Solu-
lows Windows programs to
the new Macs. SoftWindows
for $500, but it comes as
the package on the
Mac 6100/60, at
$2,500; the
6, at $3,400;
e 8100/80, at
. The paradoxical result of DOS compatibility,
ple Chief Executive Michael H. Spindler, is for Macin-
"fit in and stand out."

here does Mac stand out? Apple fans say its strong suit
n ease of use. That makes Macs an obvious pick for
s, first-time buyers, and the PC-intimidated. But Macs
so appeal to those who try to squeeze the most out of
day. A study released in February by consulting firm
D. Little Inc. concludes that Mac users finish their tasks
less time than Windows users and are 50% more like-
mplete their tasks correctly. The study measured the
tivity of 100 corporate business users doing 24 com-
tasks, such as editing documents, managing files, and
g.

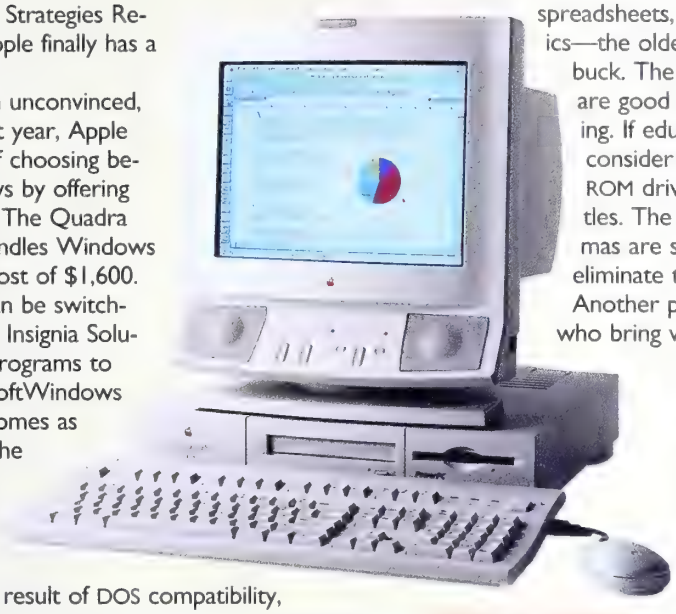
reason Mac users scored better: Mac software seems
natural to use than Windows programs, and some tasks
wer steps to accomplish. Says analyst Robert Corpuz of
researcher Dataquest Inc.: "Apple is targeted to any-
ny age. You put the mouse in the hands of an eight-
d, and they can get going."

hich model do you buy? Do you go for the older ma-
which use the Motorola 68040 microprocessor? Or is
e time to grab a new Power Mac? If your computing is
to writing and basic accounting, you don't need the
Mac. But if you're a speed freak, a Power Mac may be
ket.

fact is, there still isn't a lot of Power Mac-specific soft-
vailable to take full advantage of its muscle. The Power
re chiefly for those with intensive number-crunching
finance specialists, scientists, designers and architects,
p publishers, and video producers. When more Power
ftware is available—and some major programs should
in Power Mac versions by the turn of the year—the
achines' appeal could broaden. Over the next two
the PowerPC will be used in all Macs.

for the average buyer doing typical productivity tasks—spreadsheets, word processing, and some graphics—the older models may offer more bang for the buck. The Performa 400s, at $1,000 to $1,600, are good tools for word processing and budgeting. If educational software is big in your home, consider one of the Performa 500s with a CD-ROM drive for the cool new "edutainment" titles. The cost: $1,700 to $2,200. The Performas are supereasy plug-and-play models that eliminate the fuss of connecting monitors.

Another popular consumer model for those who bring work home from the office is the Quadra 610, a faster machine with 8 megabytes of memory, up from 5 Mb in the Performa 575. The cost: $1,400 to $1,800. Quadras also can be easily upgraded to a Power Mac. A CD-ROM can be added for multimedia titles, but most experts say a Quadra is more machine than you need if your main use is educational programs. Says longtime Apple dealer Crow: "That's like buying a Maserati to take the kids to school."



POWER MACINTOSH 6100

It's a speed demon, but you'll need software specially designed for its RISC chip

For the worker on the go, Apple has come up with new reasons to consider a PowerBook laptop. On May 16, the company unveiled pumped-up models that are twice as fast as the older PowerBooks. The new 500 series PowerBooks, priced from $2,000 to $5,400, also sport design changes: The trackball has been scrapped in favor of a "trackpad" that, Apple says, gives users more accurate control over movement on the screen. In addition, sturdier plastics are used for the casing, thus the screens are larger, and the keys have been expanded to the size of standard desktop keys. There's a small price to pay for this: The new units are a fraction of an inch bigger and a few ounces heavier.

Apple also has souped-up the PowerBook Duos—which are slimmer, 4-pound versions that can plug into a docking station to become desktop machines with full-sized monitors. The new Duo 280s, priced from $2,500 to $4,100, are faster and can be upgraded to a PowerPC. Not sold yet? Michael Mace, Apple's manager of competitive analysis, offers one more argument. "PowerBook is not just a portable computer, it's a Macintosh," he says. "And Macintosh is better."

POWERBOOK 540

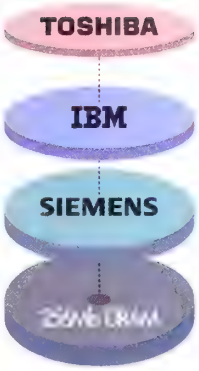
The new models are sturdier and twice as fast as the old ones

Another Mac fanatic? Just so. But when was the last time you heard such ravings from a PC fanatic?

By Kathy Rebello in San Francisco

PHOTOGRAPHS BY JOHN GREENLEIGH

To build a n



At Toshiba, we see a new kind of tomorrow. One where restrictive corporate borders are sformed into paths of shared innovation. world-class companies work together for benefit of all.

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Together, we're developing an advanced generation ynamic RAM — a 256 megabit DRAM chip.

By pioneering 0.25 micron technology, electronic

re, we had to tear down some old walls.

ways 1/1600 the width of a human hair are being d to pack 256 million bits of information — enough to d 25,000 pages of text — onto a fingernail-sized chip. The result will push the capacity of semiconductors by r 16 times. But that's only the beginning.

It will accelerate the innovations of our next century — many not even imagined yet — by years.

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GRP93-110

ten show up as distinct bands on the page. But color can greatly enhance the readability of graphs in a school paper and can add a dramatic touch to anything you print. The HP DeskJet 500C, with a $719 list price, offers a low-cost entry to the world of color printing.

No home computer is really complete anymore without a modem, the device that allows your PC to communicate over phone lines. The Information Superhighway is still a long way from being built, but there are extensive online services available that give a taste of things to come (page 180).

There's not a tremendous amount of difference among the modems that are available for home use. Nearly all of the devices are built around chips from either Motorola Inc. or Rockwell International Corp. and have very similar specifications. They have also been standardized to the point where any modem should be able to talk to any other. And, as has generally been the case for electronic equipment, modems have grown cheaper even as they have become more powerful. Most can now transfer data at a zippy 14,400 bits per second (bps), allowing the transfer of a page of double-spaced text in about one second. Many modems can also send and receive faxes.

In looking for a modem, shoppers should consider several major factors. You can buy either an internal modem, which fits into a slot inside your PC, or an external unit, connected by a cable. Internal modems run $10 to $20 cheaper and don't take up any room on your desk. But a series of status lights on an external modem can often make it much easier to diagnose communications problems.

In choosing a modem, faster is generally better. While 2,400 bps modems are available for as little as $60, you probably should go for a 14,400 bps unit that conforms to an international standard known as v.32. Newer standards, called v.fast and v.32 Terbo, are emerging and promise even faster data-transfer rates. But until a single, higher-speed standard comes along, these units are probably not worth the extra cost for most users. Furthermore, it's not clear that the existing telephone network can handle data much faster than 14,400 bps over ordinary dial-up lines. And even if you see no current need for fax capability, it's probably a good thing to get, since it generally adds no more than $10 or so to the cost of the modem. Taking full advantage of the fax capacity may cost a bit more. Although most modem makers throw in fax software, it often isn't very good. You'll probably want to add a Windows fax program such as Delrina Technology Inc.'s $89 WinFax.

There are plenty of good modem choices on the market. One of the better-rated modems is the Practical Peripherals PM14400FXMT, which is available for $179. Other good choices include the U. S. Robotics Sportster, which costs $150, and the $210 Hayes Accura 144+Fax144.

It's a good thing modems have gotten cheap, because the device as we know it may soon become obsolete. Manufacturers are beginning to turn out versatile circuit boards utilizing so-called digital-signal-processing (DSP) chips that allow them to perform the functions of a modem, an audio card, and even an answering machine. A DSP modem has the capability to be upgraded to whatever new standards or functions come along just by supplying it with new software.

Best Data Products Inc. will soon release its Advanced Communication Enhancement (ACE) board using technology developed by IBM. In addition to functioning as a multistandard fax modem, the $300 ACE board will also give home-computer owners business-class voice mail that will allow them to establish a separate mailbox for each member of the family. Currently, only a few PCs—such as the Compaq Presario and the AST Advantage!—offer such capability, using older technology. But DSP will bring much more than telecommunications. For example, the ACE board also functions as a SoundBlaster—compatible sound card for multimedia presentations. And as other modem makers follow suit, the competition will drive down the price of DSP boards.

The rapid technological change that has turned home computers from expensive toys to affordable workhorses in a few short years is bound to continue. Next year, you'll be able to buy even more for even less. But just think of all you're missing in the meantime. □

CANON BUBBLE JET

The popular inkjet printer's output is close to laser quality

PRINTER PUZZLE: INKJET OR LASER?

Inkjet printers offer high-quality results at modest cost. Some also offer color printing. But they are slow. Personal laser printers provide even sharper output at higher speed, but at somewhat higher cost. Some top-rated models for home systems:

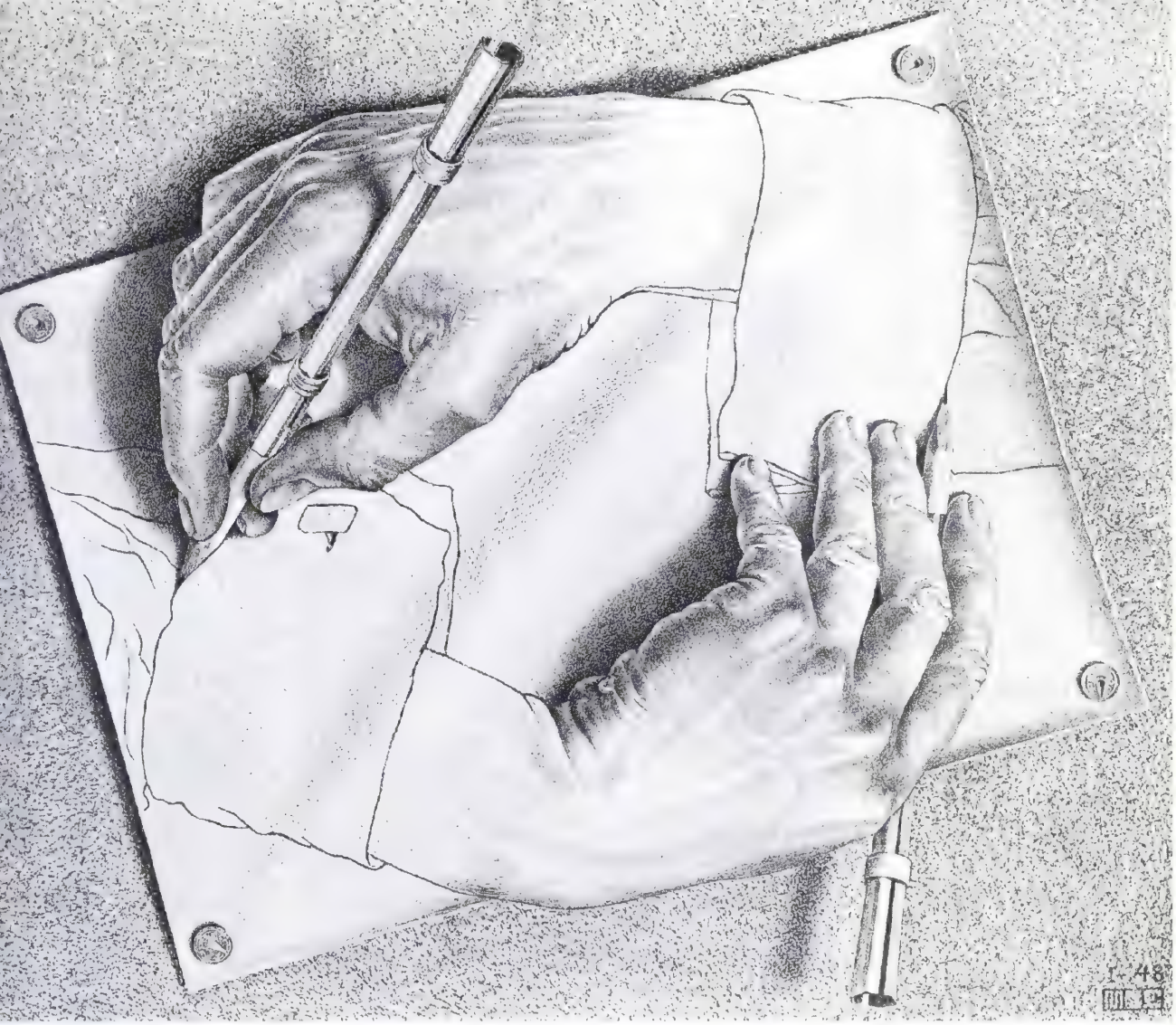
INKJETS

Manufacturer/Model	List price	Features
CANON BJ-200e	$399	Strong performer, low price
HEWLETT-PACKARD DeskJet 500C	$719	Low-cost color
TEXAS INSTRUMENTS microMarc	$329	Top value

LASERS

HEWLETT-PACKARD LaserJet 4L	$849	Rugged bargain performer
HEWLETT-PACKARD LaserJet 4P	$1,229	600-dot-per-inch resolution
LEXMARK IBM 40375E	$799	Low-price contender

DATA: NATIONAL SOFTWARE TESTING LABORATORIES/McGRAW-HILL INC., BUSINESS WEEK



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Started production in Iowa in 1911.

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THE SMART STATE FOR BUSINESS

TRAVELIN' LIGHT

A new generation of notebooks, subnotebooks, and palmtops is quicker, more versatile, and easier on the eyes. And they weigh in at less than 10 pounds—sometimes way less

BY EDWARD C. BAIG

Portable computers have long been objects of desire for gadget lovers. Remember the mid-80s, when you thought that 20-pound monster your high-tech colleague lugged around was really cool? More recently, there was that moment at 40,000 feet when you put down the in-flight magazine and fixed your envious gaze on a sharp-looking gizmo the person in 14C was pecking away on. "That machine's about half the size of my laptop," you muttered. "Bet it weighs much less, too. Probably packs two to three times the computing wallop. And it's in color."

Mobile computing still gives folks reason to drool. The liquid-crystal displays (LCDs) on today's monochrome notebooks are far brighter and easier on the eye than the low-contrast gray versions of yesteryear. Their color counterparts—which are nudging the monochrome species toward extinction—boast bright tones that rival anything you might see on a desktop. Many people are even choosing a color notebook as their primary home computer: You don't have to carve out much space for one, it goes on the road, and if you want a bigger display, it's easily connected to full-size color monitors.

It seems that the more laptop computers shrink, the more they offer. Color is even turning up in the hot new subnotebooks. These diminutive machines are a cross between conventional notebook

IBM THINKPAD 360C
Superb sound, excellent video capabilities—and it runs about $3,700

s and souped-up electron-
organizers. But despite
eir shrunken appearance,
ey are full-fledged comput-
, powered by Intel 486 mi-
processors. Most subnote-
oks weigh in at about 5
unds, a couple of pounds
s—and a couple of inches
aller—than conventional
tebooks. Prices are falling
well: Earlier this year,
mpaq Computer Corp. un-
shed the Contura Aero
5, a sleek 3½-pound sub-
tebook at a street price of
,399 and up for mono-
rome, $2,199 and higher for
or.

f even the Aero is too
fty for you, consider a tiny
lmtop such as the 11-
nce, $549 Hewlett-Packard
100LX. You won't be able
touch-type on the tiny
yboard or handle complex
phics on the petite screen.
t it's a real IBM-compatible
mputer, though it can't run
icrosoft Windows.

Anyone considering a port-
le PC must wade through
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ubnotebook may be easi-
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might want a color ma-
ine to spice up presenta-
ns, and color screens make
much more pleasant to use
ndows. But color portables

ULTRALITE VERSA 33C

ving color, big keys, and three-year warranty

A LAPTOP LEXICON

ACTIVE-MATRIX DISPLAY Newer technology provides brilliant color displays that rival desktop monitors. But the design carries a high price, both in dollars and shorter battery life.

PASSIVE-MATRIX DISPLAY This older technology has improved considerably, but the screens can appear washed-out, especially when viewed from an angle. Fairly inexpensive and easy on batteries.

NOTEBOOK COMPUTER Typically weighs 6 to 10 pounds with key accessories, fitting a screen up to 12" diagonal into a package about 9" x 12" and about 2" thick.

SUBNOTEBOOK Weighs 4 to 6 pounds with accessories in a package trimmed down to about 7" x 10" x 1½". But the slim package means a smaller display and a cramped keyboard.

PALMTOP Full-fledged computer little bigger than a calculator. But tiny screen, miniature keyboard, and lack of storage limit usefulness.

are a tad heavier and cost a good deal more than monochrome versions—and they'll drain a battery roughly 40% faster.

Even when evaluating laptops within a class, consumers may have to weigh the various machines' features. You might, for example, be satisfied with the crisp appearance of the characters on one display but find the machine so heavy you'd almost swear it was a desktop computer with a handle attached.

When evaluating the heft of any machine, don't forget to factor in the accessories you'll need. An AC adapter/battery charger is a must. And no road warrior will set forth without a spare battery, which weighs about a pound. Compaq's new LTE Elite series ($3,299 to $6,499) helps out by building the AC adapter into the unit. With subnotebooks, you'll also have to add the weight of an external floppy drive if you want to use disks to transfer data.

A screen test is especially important if you're purchasing a color machine. Computers with "active-matrix" LCD screens have the best-looking displays. Active-matrix technology uses a separate transistor to power each screen dot, or pixel. The result is a clear display that doesn't have the washed out look of many passive-matrix screens. The display looks good even at wide viewing angles, and high "refresh" rates avoid the common laptop problem of the cursor disappearing temporarily when you move the mouse.

Jazzy color can really eat up battery life

But the technology is expensive, fetching $3,500 and up, though prices are starting to drop. Atsutoshi Nishida, the president of Toshiba America Information Systems Inc., says active-matrix units are unlikely to reach the $2,000 level, where many buyers jump in, for about a year and a half.

Passive-matrix screens can be harder on the eyes. They are also prone to streaky displays. But they cost about $2,000 less than their active-matrix brethren. Newly improved dual-scan technology—the top and bottom halves of the display are scanned independently for a cleaner, brighter appearance—may provide a smart compromise for the bargain-minded. The machines are priced about $1,200 below active-matrix models.

Buyers face other trade-offs. You may like a compact unit's light weight but find its keys packed together so tightly that even a dexterous Katharine Gibbs School graduate would complain. Then there's the feel of the keyboard—are the keys too firm or too mushy? And try out any built-in or snap-on trackballs or other pointing devices that handle the chores of a mouse. IBM's popular ThinkPads include the crafty TrackPoint II pointing device that resembles a pencil eraser. Nudging it around the G, H, and B keys, when you press the TrackPoint harder, the cursor moves faster. The "click" buttons are situated below the space bar, convenient for both right-handers and southpaws.

Laptop buyers should make sure they get enough random-access memory to handle their workloads, since adding RAM is both more expensive and harder to install

than it is in desktop machines. And make sure a capacious hard drive is on board, because here, too, it's difficult to upgrade later. Expansion is another consideration. Most new portables provide at least one PCMCIA slot, into which you can plug credit-card-size modems, memory cards, network adapters, or other add-ons. Some machines also allow you to connect to a desktop "docking station" that allows you to add more easily a CD-ROM drive, an extra hard drive, and other expansion devices.

Security can be a worry. Experts say thieves who steal laptops are often after the data inside, not the machine. Some units come with removable hard disks, which let you use separate drives for different people or tasks—and keep any particularly sensitive data locked up.

Multimedia is no longer exclusively the province of the desktop. The ThinkPads and the T4800CT color notebooks from Toshiba ($6,499), for example, boast superb sound and video capabilities. What's more, IBM has just introduced its ThinkPad 360C, an active-matrix color machine costing about $3,700, down roughly $1,700 from the new top-of-the-line ThinkPad 755C. (To help reduce the price, IBM shaved 2 inches off the 755's 10.4-inch-diagonal screen.)

Guidance on additional models comes from National Software Testing Laboratories/McGraw-Hill Inc. (NSTL), which tested machines running Intel or Cyrix 486-class processors. The subnotebooks all weighed less than 7 pounds, including external floppy drive, battery packs, and AC adapters. Regular notebooks were under 9

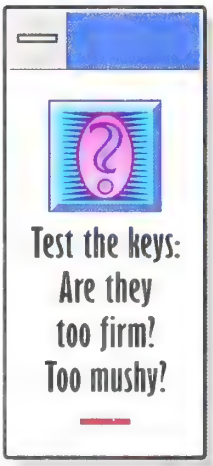
COMPAQ CONTURA AERO
Looks like a subnotebook, performs like a full-rigged PC, and starts at $1,399

pounds with battery and adapter. Many of the latest hot models, however, were not available in time for NSTL's tests.

Although the price differential between monochrome and color machines is shrinking, the best deals still await those who can live without a color display. Monochrome notebooks tested by NSTL average about $400 less than similarly configured color versions. The relatively unknown Mitsuba Ninja II/DX2-66 and Micro-International's HPC Performance Series 6500M, which shared NSTL's top rating among monochrome machines, boast strong backlit LCD displays and can handle hard drives of up to 340 megabytes.

HP100LX-2MB
Forget touch-typing—but the IBM-compatible weighs 11 ounces and costs $549

Digital Equipment Corp.'s DECpc 425SL employs a slower microprocessor than do the Ninja and Micro-International portables, but it offers terrific battery life—the best among the 25-Megahertz machines that were tested. On a standard nickel-metal hydride battery, the machine ran for just over four hours, some two hours longer than either the Micro-International or Ninja.



Test the keys: Are they too firm? Too mushy?

Indeed, poor battery life has been the bane of the laptop user. But here's some juicy news: Longer-lasting nickel-metal hydride batteries are replacing nickel-cadmium units. A good choice in the long-life category might be Toshiba's T1900C, a $2,400 color unit that claims five hours of use on a charge. Not enough? Toshiba says the lithium-ion batteries used in its Portégé line offer 75% longer battery life than a NiCad and about 50% more than nickel-metal hydride.

The active-matrix color screens on NEC Corp.'s UltraLite Versa 33C and Sharp Corp.'s PC-8650 scored best among the color notebooks tested by NSTL. Although battery life was just so-so, their displays delivered brilliant, fully saturated colors and deep contrasts. The testers praised Versa's well-spaced keyboard, and users can attach a mouse to either side of the keyboard. When connected to an external monitor, the Versa can display up to 256 colors.

Subnotebooks are the portable units most likely to trigger computer envy. But putting these machines on a crash diet came at a cost: Most subnotebooks lack an internal floppy drive, and some of them have been saddled with poor battery life or shrunken keyboards. NSTL gave strong recommendations to the Zenith Z-Lite 425SL Model 170W, the Altima Traveler, and the Packard Bell Diplomat.

The subnotebook most people are lusting after these days is the Portégé T3400CT. It manages a nearly full-size keyboard, a bril-

TOSHIBA SATELLITE T1900C
Its nickel-metal hydride batteries give five hours on a single charge

liant active-matrix color screen, and more than four hours off a single charge. Portégé's AccuPoint pointing device is similar to the ThinkPad's eraser head; the "click" and "drag" buttons resemble those on Apple Computer Inc.'s PowerBooks. Alas, with a price of $3,999—$2,599 for a monochrome version—Portégé's compact size isn't matched by a svelte price. Of course, if you take the machine on an airplane, chances are those jealous eyes will be on you. □

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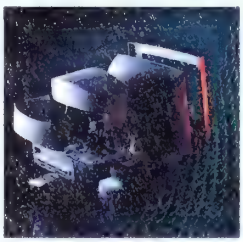

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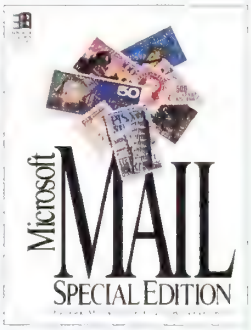

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GOING PLACES

Sure, there's an array of gizmos that can keep you tethered to the office. But wait—the next generation will be faster, friendlier, and cheaper

BY MARK LEWYN

Travel used to mean being out of touch. You could grab a pay phone to reach the office between flights or appointments, but for those long hours in the air or driving in your car, you might as well have been on the moon.

Being in constant contact can be a mixed blessing, but an array of new technologies has made the impossible commonplace. The cellular phone, barely 10 years old, has become ubiquitous—and new systems could soon bring higher quality at lower prices (page 178).

Cellular-service companies have adopted Gillette Co.'s approach to markets: Give away the razors and live off the blades. You can buy a car phone for as little as $50, and even Motorola Inc.'s popular MicroTAC pocket phone is available for under $200. There's a catch, of course: Cellular operators heavily subsidize the sale of the phones, and to get the bargain price, you have to agree to buy up to a year's service.

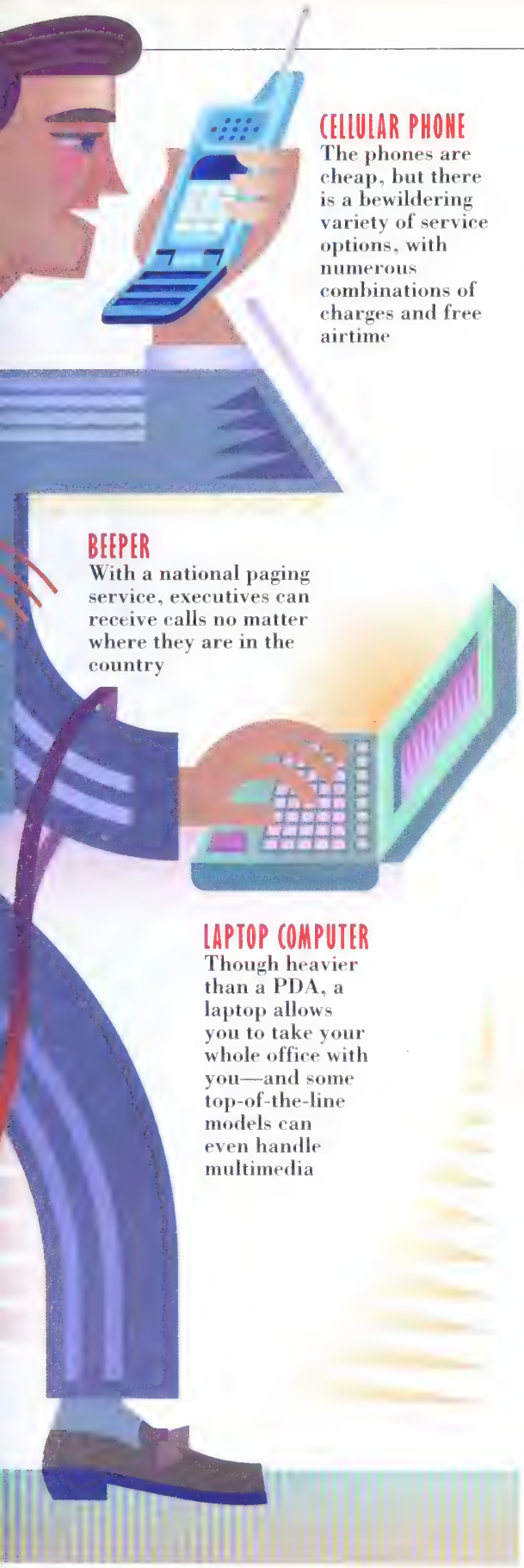
A baffling variety of service options is available. In most areas, you'll have a choice between two carriers, each offering different combinations of monthly charges, free airtime, and per-minute usage charges. For example, Contel Cellular Co. in Bakersfield, Calif., offers a basic plan for $19.95 a month. The first five minutes of airtime are free, with each additional minute going for 95¢. Another option provides 100 minutes for $62.95 a month. Additional minutes cost 33¢ during business hours and 19¢ off-peak.

Traveling execs who want to receive as well as make calls often carry both a pager and a phone. Answering a phone that rings in your briefcase or purse can be awkward; it's much easier to have callers page you, then phone them back. National paging services such as SkyTel Corp. can reach you wherever you are.

As with cellular phones, paging prices vary according to what you want. For example, BellSouth Corp.'s MobileComm will rent you a

PERSONAL DIGITAL ASSISTANT
Tiny new wireless modems should make PDAs truly pocket-size communicators

PRINTER
Travelers who can't live without words on paper can get a three-pound printer small enough to slip into a briefcase



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With a national paging service, executives can receive calls no matter where they are in the country

LAPTOP COMPUTER
Though heavier than a PDA, a laptop allows you to take your whole office with you—and some top-of-the-line models can even handle multimedia

beeper for $36 a month, which includes 200 messages from anywhere in the country.

The newest and smallest computers can give your data the same portability that cellular service has given voice communications. Palmtops and the combination of notepad, Rolodex, and fax machine known as a personal digital assistant let you fit your desktop into your pocket. But communicating with the outside world still requires a phone line. Specialized radio modems are available, but current models from Motorola and Intel Corp. cost $600 (plus about $80 a month for service). And at a bulky pound or more, they are heavier than most palmtops.

Relief is on the way. A new generation of wireless modems, small enough to fit in a pocket and weighing little more than a couple of AA batteries, will come on the market later this year from Motorola and others. These modems could help the new breed of PDAs that includes Apple Computer Inc.'s Newton MessagePad—computers small enough to slip into a (large) pocket—reach their mobile-communications potential.

PDAs are still in their infancy, and the industry has yet to figure out what form they will finally take. The Newton's leading feature is its ability to translate handwriting into computer text—though most users find the slow, inaccurate process frustrating. AT&T's attempt to build a PDA around a cellular phone, called Eo, bombed in the marketplace. A similar device, the Simon, created through a BellSouth-IBM joint venture and originally due in April, has been sent back to the drawing board.

The market may get some definition this summer, when Motorola introduces its $1,500 PDA, which includes built-in data, fax, and radio modems in a 1½-pound package. Motorola eschewed handwriting recognition in favor of an on-screen keyboard, which you use by tapping "keys" with a penlike stylus. The Envoy is generating big excitement, thanks to General Magic Inc.'s Magic Cap operating system and the Telescript communications program. These programs, together with new services, such as AT&T's PersonaLink, will send electronic "agents" out onto data networks to collect customized information for you. For example, you could set up a program that would beam selected stock quotes to your PDA by radio e-mail each afternoon.

If you still rely on the printed word, these new communicators can even team with an ultralight inkjet printer to become a completely portable fax machine. For example, Eastman Kodak Co.'s $219 Diconix 218si weighs just 3½ pounds and is small enough to slip into a briefcase.

This new world of communications is no longer earthbound. Airplane phones, though widely used since the mid-1980s, are severely limited: They can't receive calls, and quality is erratic. But new digital systems are improving matters. Soon you'll be able to exchange e-mail aloft by plugging a laptop or PDA into a digital phone jack at your seat.

The most obvious difference in the new systems will be sound quality, but digital service will open new horizons. Sometime this year,

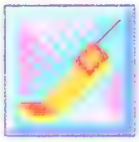
GTE Airfone, In-Flight Phone, and McCaw Cellular's Claircom Communications all plan to offer ground-to-air calling. You let the network know where you are by running a credit card through a swipe reader when you board the aircraft. Then any incoming calls will be directed to your seat.

Some new services are already available. Airfone began putting fax machines on planes in March. In-Flight, which serves USAir and America West Airlines, among others, offers a seatback display terminal that you can use to type out a message and fax it to the ground for $3. The In-Flight screens offer stock quotes for 75¢ apiece and games for $3.

Prices are dropping, too. Claircom plans price cuts of 25% to 30% over the next year. Call either of two frequently used numbers that you register with Airfone, and the toll drops from a $2.50 setup charge and $2.50 per minute to $1.88 for each. In-Flight offers a flat $2-per-minute rate.

Whether in the air or on the ground, staying in touch is easier than ever, thanks to breakthroughs in wireless communications. Now, increasing competition will make these communications not only simpler but much cheaper. □

WELCOME TO THE WIRELESS WAR



Bill Adler Jr. likes to stay in touch. When the 37-year-old publishing agent is away from his Washington (D.C.) home, a cellular phone is always hanging from his belt. Once, he closed a book deal while watching his baby daughter at a playground. "It lets me have my office anywhere I happen to be," he says.

But as popular as cellular phones have become—with everyone from parents driving carpools to high-powered executives—limited capacity, high prices, and often poor sound quality have restrained the growth of the current analog phone system. New competition, though, could bring relief.

The first challenge to conventional cellular may come from Nextel Communications Inc. in Rutherford, N.J. Nextel gained a foothold in the business by buying up specialized mobile radio licenses intended to be used to dispatch taxicabs, then winning government approval to use the frequencies for mobile-phone service.

The first Nextel system went on the air earlier this year in Los Angeles, helping to relieve the city's chronically congested circuits. Nextel's all-digital system should provide improved quality. The cost of Nextel's phones and service is comparable to conventional cellular. A monthly fee of $45 buys 250 minutes of airtime over three months. Each additional minute is 41¢.

Such competition is already prodding cellular giants such as McCaw Cellular Communications Inc.—the nation's largest cellular operator—to convert to digital service. Many McCaw systems have already been outfitted with digital equipment, but customers must buy new phones capable of handling both analog and digital transmissions. Such units, which ultimately will be supplanted by purely digital sets, are just hitting the market. The price of dual-mode units starts at the high end for conventional cellular phones, $200 to $300.

Nextel is not the only new combatant in the wireless wars. Later this year, the Federal Communications Commission will auction off licenses for another new type of wireless communication known as personal communications service. Technical advances will allow PCS to cram a lot of capacity into its slice of the radio spectrum. PCS companies, such as American Personal Communications in Washington, D.C., hope that big capacity will mean a large customer base—and that high volume will let them underprice regular cellular.

For the time being, conventional analog cellular is the only real choice in most markets, though that will change quickly. Digital service will require you to buy a new phone. Fortunately, though, the instruments have gotten so inexpensive that upgrading shouldn't be much of a financial burden.

By Mark Lewyn in Washington

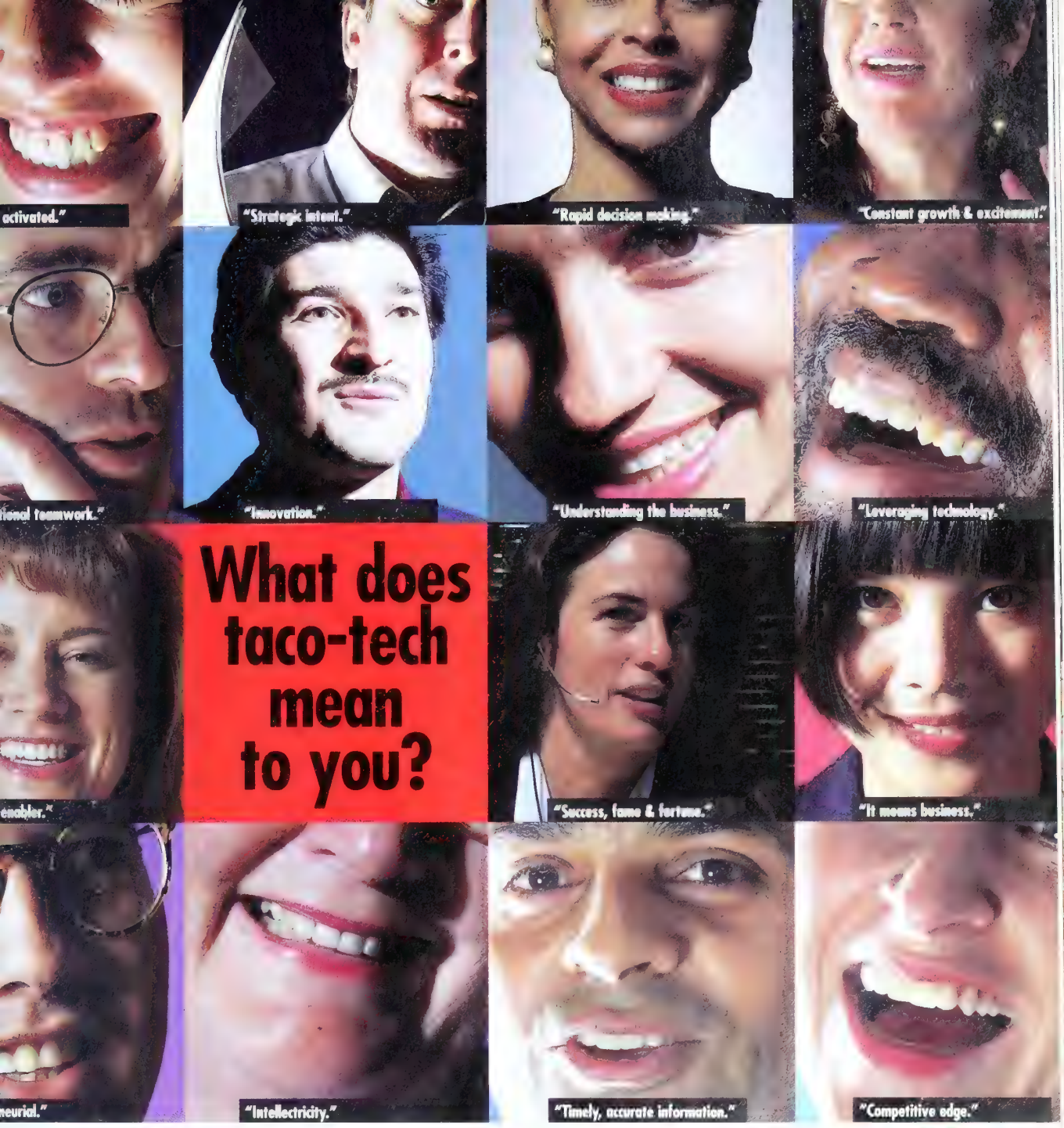
CELLULAR SYSTEMS DEMYSTIFIED

ANALOG CELLULAR The most widely available system, with coverage everywhere but the most remote areas. Phones are cheap, but service is relatively expensive, and transmission quality is erratic.

DIGITAL CELLULAR The planned replacement for analog technology, digital will greatly improve both the capacity and quality of transmission. Initially, phones may cost more than analog models—and it may take some time for service to become widely available.

PERSONAL COMMUNICATION SYSTEMS A new variety of cellular service, operating on newly assigned frequencies. Promises high capacity, good quality, and, potentially, low cost. But construction of systems won't even begin until the government auctions off licenses this summer.

SPECIALIZED MOBILE RADIO Another form of digital communication, SMR can combine paging with voice service. Currently available only in limited markets, planned major investments by such big players as MCI could make SMR a force.



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YOU NAME IT, THEY GOT IT

Stock quotes, weather reports, Dead Sea Scrolls—on-line services are bottomless pits of data. But each has quirks and foibles. Then there's that enticing, baffling Internet...

BY STEPHEN H. WILDSTROM

At the dawn of the computer age, designers had visions of the new machines revolutionizing communications. By the late 1970s, this hope had become a reality for academics after government funding helped tie campus computer centers into a giant network. But it has taken 15 years of the PC era for computer communications to reach the point where it's both inexpensive and easy for everyone to get on-line. And the growth of a mass market has set off an explosion in the services you can tap with the dial of a modem.

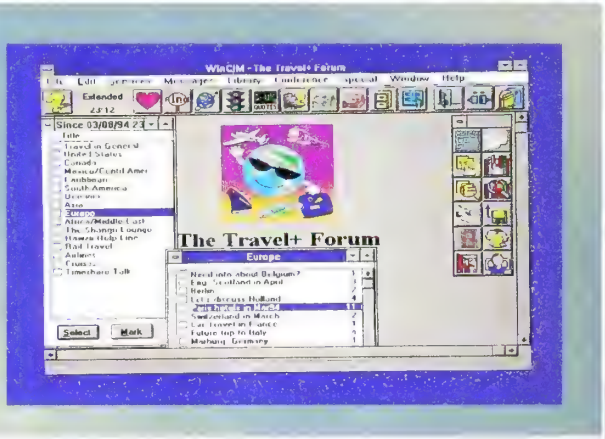
The variety of information and services awaiting your call is breathtaking. You can pick up a stock quote, order an airline ticket, check the weather in London, or read reviews of new cars. You can peruse the catalogs of the world's leading libraries, check out previously top-secret documents from the archives of the former Soviet Union, look at the Dead Sea Scrolls, or download racy pictures.

But perhaps the greatest appeal of on-line services to many users is the ability to converse with interesting strangers—and to get expert advice on an immense variety of subjects. While the idea of epistolary friendships via computer may seem odd at first, the exchanges quickly become addictive.

Once you have a computer and a modem, the easiest path into cyberspace is with one of the big three on-line services: CompuServe, Prodigy, or America Online. All make it easy to get on-line by offering starter kits, available at computer shops and bookstores, that package communications software with an initial service credit. The popular services have much in common, all offering the same basic capabilities. For example, each provides electronic mail. Each lets you book a plane trip. Each offers news, weather, stock prices, and sports. There's an encyclopedia and other reference works on-line. And all provide bulletin boards where users can chat about a vast array of topics.

But each also has its own personality, strengths and weaknesses, and pricing:

CompuServe Inc. is the oldest and most comprehensive of the three. So broad are its offerings that Compu-



COMPUSERVE Read the road map—it's a time-saver, and time is expensive

AMERICA ONLINE Its performance has improved, but financial offerings remain sketchy

rve offers a poster-size road ap to help users navigate eir way through the many sources available. It's also e most expensive, so a od guide can help you oid running up the meter ile looking for that inter-ting tidbit you know is und somewhere.

Like other major services, mpuServe offers AMR rp.'s Eaasy Sabre reserva-n system for checking ates and prices and pur-asing tickets. But only mpuServe also provides (at ditional cost, of course) the avyweight reservation and oking services of the Offi-l Airline Guide, the one at travel agents use. Com-Serve also offers by far the ost comprehensive financial sources of the popular ser-es (page 186).

Probably CompuServe's ost impressive feature is mputer support. Dozens of ftware and hardware ven-rs, from Dell Computer rp. and Microsoft Corp. to om-and-pop software hous-offer technical support on mpuServe "forums." uestions posted on forums nerally get a knowledge-

MOSAIC **It makes the Internet a little less scary—and it's free**

able answer within a day or two—companies vary in how quickly they respond. If you don't need an answer immediately, posting a question on CompuServe beats spending an hour on hold waiting for tech support to come on the phone. Often the solution to a problem may involve downloading a fix to the software, also available from CompuServe. Watch out, though: Time you spend in forums, including downloads, is subject to a $9.60 per hour surcharge, and the cost can build quickly.

In its earlier days, CompuServe had a well-earned reputation for being difficult to use. Recent interfaces, however, have made finding what you are looking for relatively easy. The CompuServe Information Manager for Windows (WinCIM) is slick. The company has also responded to complaints that it charged too much by cutting its effective prices by about 40%. It also offers a program, called Navigator, that allows you to download messages and reply to them off-line, trimming hourly charges.

Four years after its launch as a joint venture of Sears, Roebuck & Co. and IBM, **Prodigy Services** remains something of an enigma. The service shows its roots as a combination information source and home-shopping tool. Certainly Prodigy's most distinctive—and distracting—feature is the box at the bottom of the screen that features commercials, usually for products related to whatever you happen to be reading.

The three major services offer starter kits for tyros

Prodigy is also the service most heavily committed to on-screen graphics—a mixed blessing. Its screens are lively and colorful, but much of that graphic information has to be transmitted over relatively slow telephone lines. The result: Prodigy can be very sluggish. And the photos and other illustrations that the service offers can take painfully long to appear on your screen—and are disappointingly grainy once they get there.

While its topical discussion groups, or "bulletin boards," are not as broad as CompuServe's, there's still a lot to choose from. The biggest shortcoming is that far fewer hardware and software companies offer support on Prodigy. And there's the bluenose factor: In its early days, Prodigy developed a nasty reputation among users for censoring messages that did not meet its strict posting guidelines. Recently, however, it has relaxed the rules.

Even experienced Windows users are likely to find Prodigy's interface confusing. Its programmers apparently decided to make the Windows version as familiar as possible to users of the DOS rendition. Unfortunately, the result violates many of the conventions that Windows users have come to expect, making navigation more difficult than

PRODIGY SERVICES **Terrific graphics, but they come at a price: Transmission time can be slow, and the pictures are grainy**

necessary. For example, "buttons" to select various functions are located at the bottom of the screen rather than on top, as is the usual Windows practice. And Prodigy substitutes its own icons for the more familiar Windows images.

Still, whatever its shortcomings, Prodigy offers a relatively low-cost route to on-line computing.

America Online Inc. (AOL) is the upstart in the field. In the past year or so, as on-line services moved from toys-for-nerds to a mass phenomenon, an aggressive campaign helped generate explosive growth for AOL. Unfortunately, the service had trouble keeping up with all the new users, prompting wags to nickname it "America On Hold." It has been expanding the capacity of its network to deal with the demand, but in many cities, the service offers a maximum speed of 2,400 bits per second (bps); CompuServe and Prodigy have long since upgraded to 9,600 and 14,400 bps modems.

AOL sports a slick interface, but its services are a quirky collection. In some areas, such as the adaptive use of computers by people with disabilities, it provides considerable depth. In others, such as business and financial information, the offerings are thin. Its "rooms," which offer live chats with other users, are a novelty that may wear thin very quickly; an on-line cocktail party can easily be as boring as the real thing. A number of periodicals make samples of their publications available on-line, but the issues aren't always current. Still, despite these flaws, AOL offers some specialized services and provides a low-priced entry to cyberspace.

Beyond the relative calm of these commercial services lurks the chaos of the **Internet**. Unlike such centralized operations as CompuServe, this prototype Information Superhighway is an anarchic network of thousands of computers around the world. The resources available on the Net are vast, mostly uncataloged, and ever-changing. Finding the information you're seeking can be intensely frustrating. But likely as not, you'll stumble on an unsuspected treasure trove of data along the way.

Beyond the limited access offered by services such as AOL, there are a number of ways to plunge into the Internet. The diffuse network has a peculiar pricing structure. Businesses with direct connections to the Net—either for their own use or for resale—pay a major network supplier such as Advanced Networks & Services Inc. based on the "bandwidth," or speed, of their link. The cost does not vary with actual usage.

The easiest way to get started on the Internet may be to hitch a ride on your company's connection. Many corporate networks are linked to the Net, but these connections aren't always advertised, so check. If that option isn't available, you can get dial-up access to the Net from local "service providers," such as Digital Express Group in Greenbelt, Md. (301 220-2020) or Netcom Online Services in San Jose, Calif. (800 501-8649). As little as $20 a month can get you started prowling the data highway.

Internet offerings fall into three basic categories. E-mail can put you in touch with millions of people around the world, including subscribers to commercial electronic-mail systems such as MCImail or CompuServe. E-mail service also includes access—generally free—to hundreds of "mailing lists," a kind of electronic newsletter.

Usenet newsgroups are the Internet's version of bulletin boards. At last count, there were about 5,000 of them covering just about every topic imaginable, from sci.math.research (reports and inquiries on academic mathematical research) to alt.binaries.pictures.erotica (enough said). Unlike commercial on-line services, no one watches over the content of these groups, so be prepared for the silly, the irrelevant, and occasionally the offensive.

The least-known but potentially most useful aspect of the Net is the vast variety of information that universities, government agencies, and companies have made available to the world. Offerings range from a collection of White House papers at the University of North Carolina to a cornucopia of free or cheap software at Indiana University.

Until recently, availing yourself of any of these resources required first finding out where they were. And once you learned, for instance, that there is a vast storehouse of economic data at the University of Michigan, you had to remember that its network "address" is una.hh.lib.umich.edu. In addition, you had to learn exotic commands to retrieve the information.

New software makes the task much easier. If you have the right sort of connection to the Net, NOTIS Systems' WinGopher ($69.95) can tame the job of retrieving data by presenting you with a series of menus and letting you use a mouse to select the files you want to move.

Better yet, the providers of information at many Internet sites are beginning to organize themselves into something called the World Wide

THE BIG THREE

Service	Telephone number / Full-Service Cost
AMERICA ONLINE Potentially the cheapest entrée to the on-line world, including limited access to the Internet. The user interface is slick, but the contents seem a bit thin.	800 827-6364 $9.95 PER MONTH, $3.50 PER HOUR AFTER FIRST 5 HOURS
PRODIGY A midlevel offering. Provides the best home-shopping opportunities, but is also the only service carrying commercials. Experienced Windows users will find the Windows version confusing.	800 776-3449 $29.95 PER MONTH, $3.60 PER HOUR AFTER FIRST 25 HOURS
COMPUSERVE The granddaddy of on-line services, CompuServe provides the broadest range of offerings. Support from computer and software makers in particular is outstanding. But users can easily run up big bills.	800 848-8199 $8.95 PER MONTH, $9.60 PER HOUR FOR "EXTENDED" SERVICES

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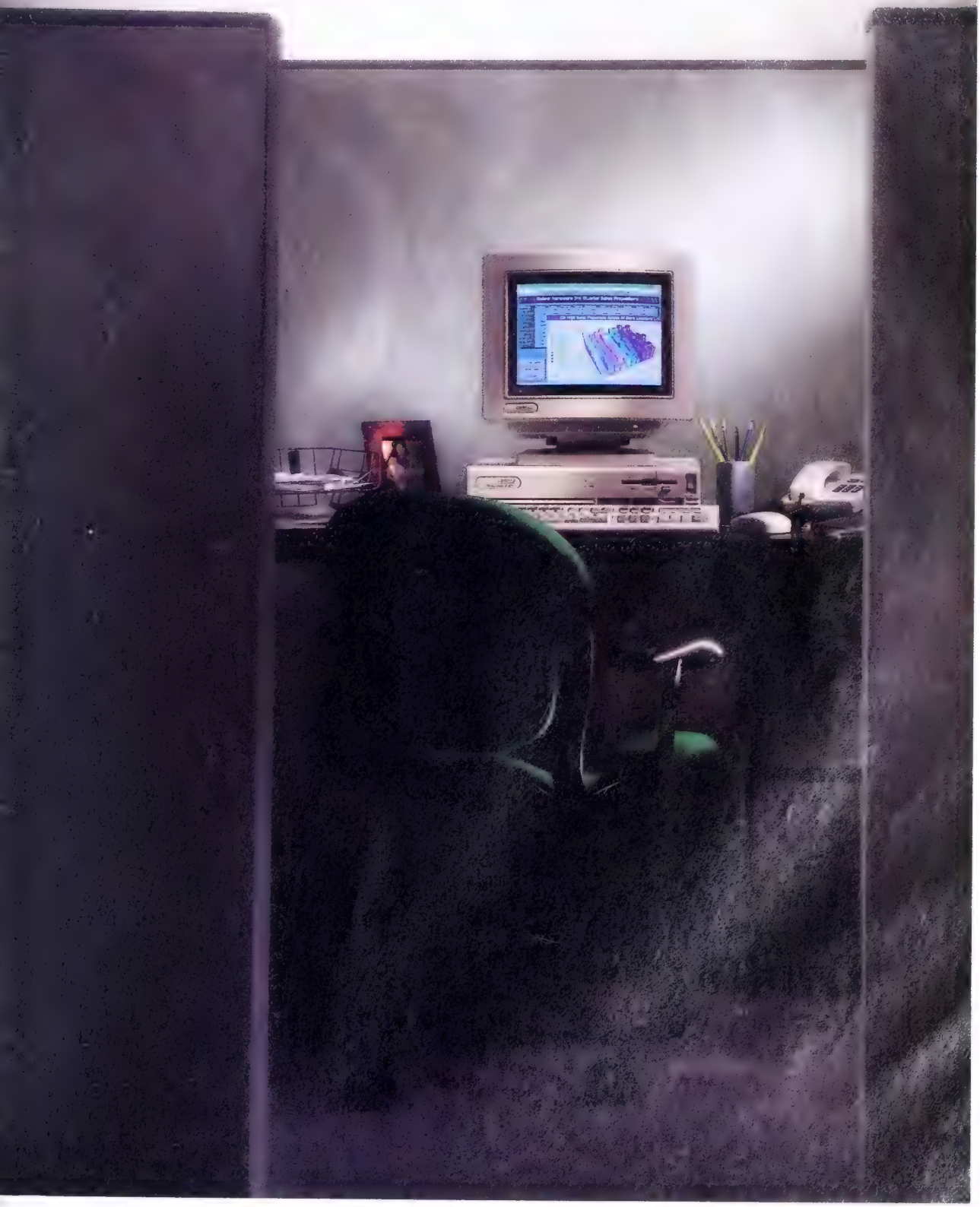

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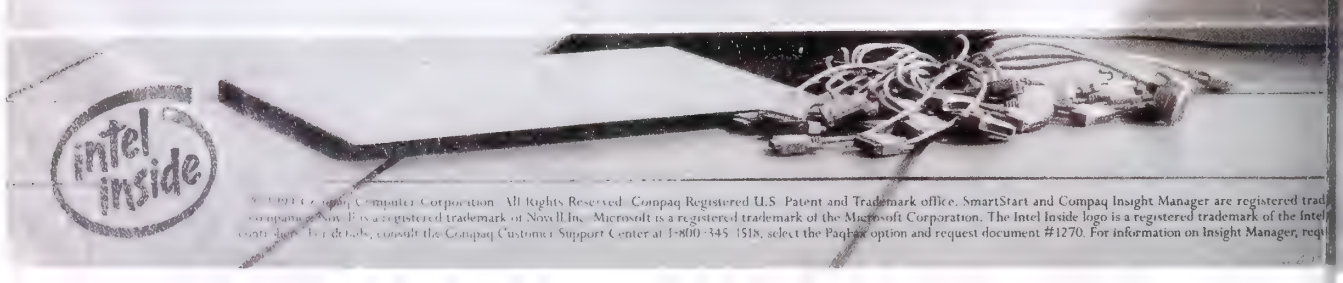

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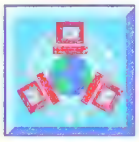
list of all product information, request the product catalog

Web. The Web uses hypertext: Clicking on a highlighted word or phrase on the screen takes you to a related article of interest. A program called Mosaic, which allows you to take advantage of the Web on your PC or Mac, is available for free download from the National Center for Supercomputing Applications at the University of Illinois. You can download the software from the Net or get a copy from a friend—there are no copyright restrictions on its distribution.

Plunging into the Internet still takes patience and a little courage. The highway remains very much a construction zone, and unlike CompuServe, no one offers a map to hang on the wall. But if you're curious and have a bit of a spirit of adventure, the Net is well worth the trouble of exploration.

The Information Superhighway, as it exists today, may come as a disappointment to anyone who believes the hype that has surrounded the concept. There aren't any movies-on-demand yet, and home shopping remains primitive. Still, there's a tremendous amount of valuable information on-line for the taking. Even a Sunday drive along the highway is likely to convince you that the potential could be everything the visionaries say. □

PLUGGING IN TO PLAY THE MARKET



The odds have long been stacked against small investors who try to mix it up with the big boys on Wall Street, but the Information Revolution is starting to change that. The proliferation of on-line services lets the average investor use a computer to download news and research about promising companies, perform sophisticated analysis of securities, and even place buy or sell orders through a discount brokerage.

For small investors, the best service may be CompuServe Inc. (page 182), which provides access to a wealth of databases that can help users find that stock gem. You can get selected Securities & Exchange Commission filings, track corporate insiders' trading, and read articles from more than 800 periodicals. CompuServe's bulletin boards are particularly strong on technology stocks. The roster includes a forum for members of the National Association of Investment Clubs. But CompuServe can get expensive. All services other than delayed stock quotes are hit with a $9.60-per-hour surcharge.

For investors interested in technical analysis, downloading historical quotes can cost big. An alternative: Telescan, which "shoots" users a finished graph of a stock in mere seconds, then allows them to overlay any of 75 technical indicators. Under Telescan's "after hours" budget plan, $45 a month gives unlimited access from 7 p.m. to 6 a.m., and all day on weekends. (During business hours, access costs 94¢ per minute.) The service also offers two news wires, SEC filings, and an impressive "screening" program that lets you search for undervalued investments.

If CompuServe and Telescan get the gold and bronze, the silver goes to Dow Jones News/Retrieval. DJNR provides exclusive same-day access to several Dow Jones publications, including *The Wall Street Journal* and *Barron's*, and analysts' reports. For all its strengths, Dow Jones has some glaring shortcomings: Unlike other services, DJNR still offers very limited graphics. Navigating the service requires users to type in such quirky commands as "//CQE" for stock quotes. Nor does DJNR provide on-line trading or bulletin boards.

SOME ON-LINE INVESTMENT OPTIONS

TELESCAN (800) 324-8246

- 94¢ per minute during business hours, $45 per month for unlimited evening and weekend access.
- Provides high-speed charts of stock performance, technical indicators, "screens" to search for undervalued investments, business news, and SEC filings.

DOW JONES NEWS/RETRIEVAL (800) 522-3567 x2251

- $1.50 per 1,000 characters of information retrieved. $30 per month for 8 hours use during evening and weekend hours of limited services.
- Access to the extensive Dow Jones business news resources and extensive financial data. But cryptic commands and lack of a graphics interface seriously hinder its usefulness.

REUTERS MONEY NETWORK (800) 346-2024

- $30 for basic software plus $10-$25 per month.
- Gateway to the Morningstar mutual-fund database, news wires, on-line trading, and investment newsletters. Designed to pump data directly into Wealthbuilder and Quicken, two personal financial management programs.

For budget-minded investors who don't want to pursue such serious research but want access to market news, stock quotes, and even on-line trading, there are cheaper options: Prodigy Services Co.'s basic charge includes access to its Strategic Investor service, which includes bulletin boards, recent Dow Jones news stories, simple stock screening, and—for an extra fee—investment newsletters. Reuters Money Network is a comprehensive personal-finance program that, for $10 to $25 a month plus $30 for the software, provides on-line access to Dow Jones stories, stock quotes, and a Morningstar Inc. mutual-fund database. With luck, these on-line tools should pay for themselves many times over with profitable investment advice.

By Dean Foust

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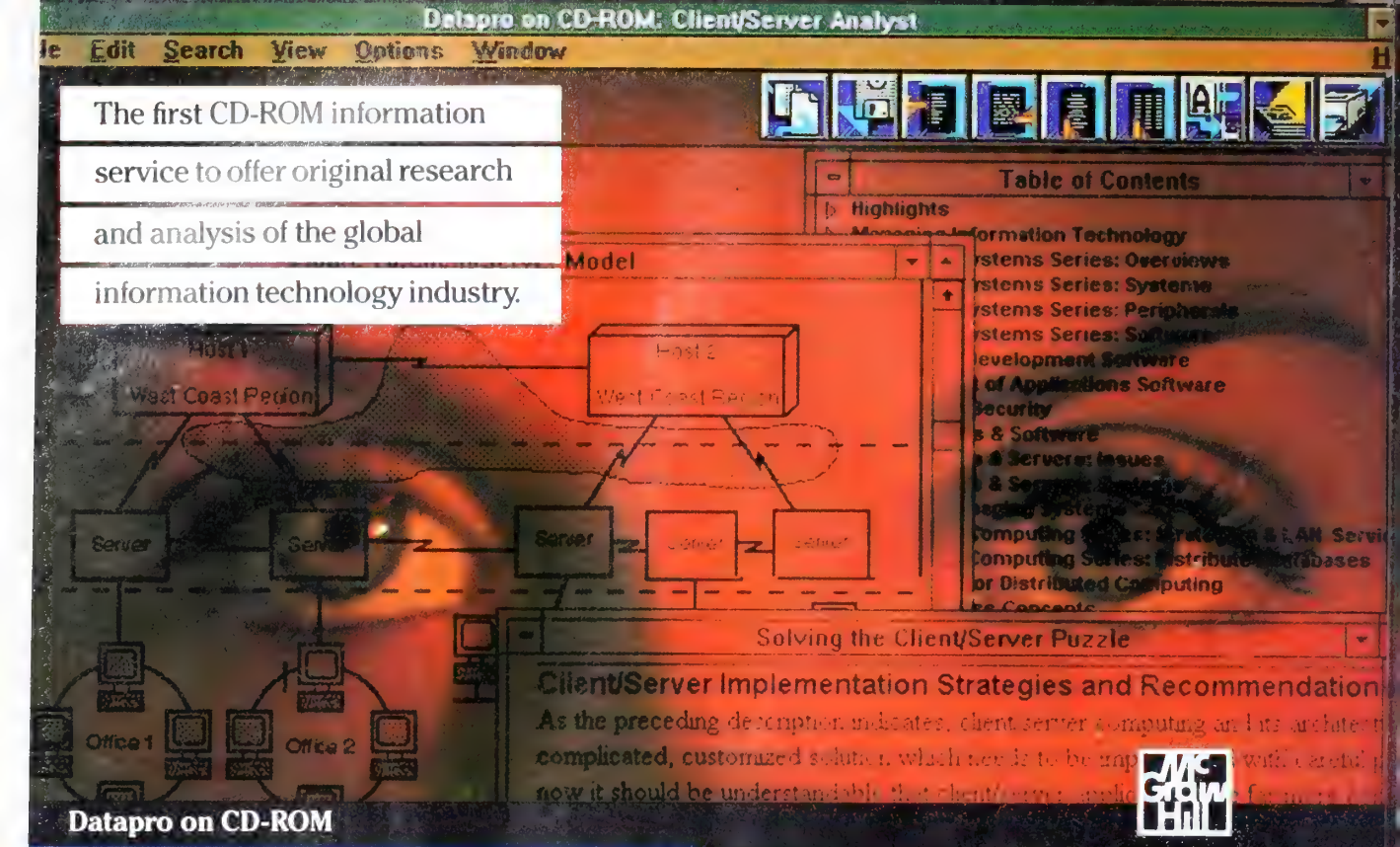

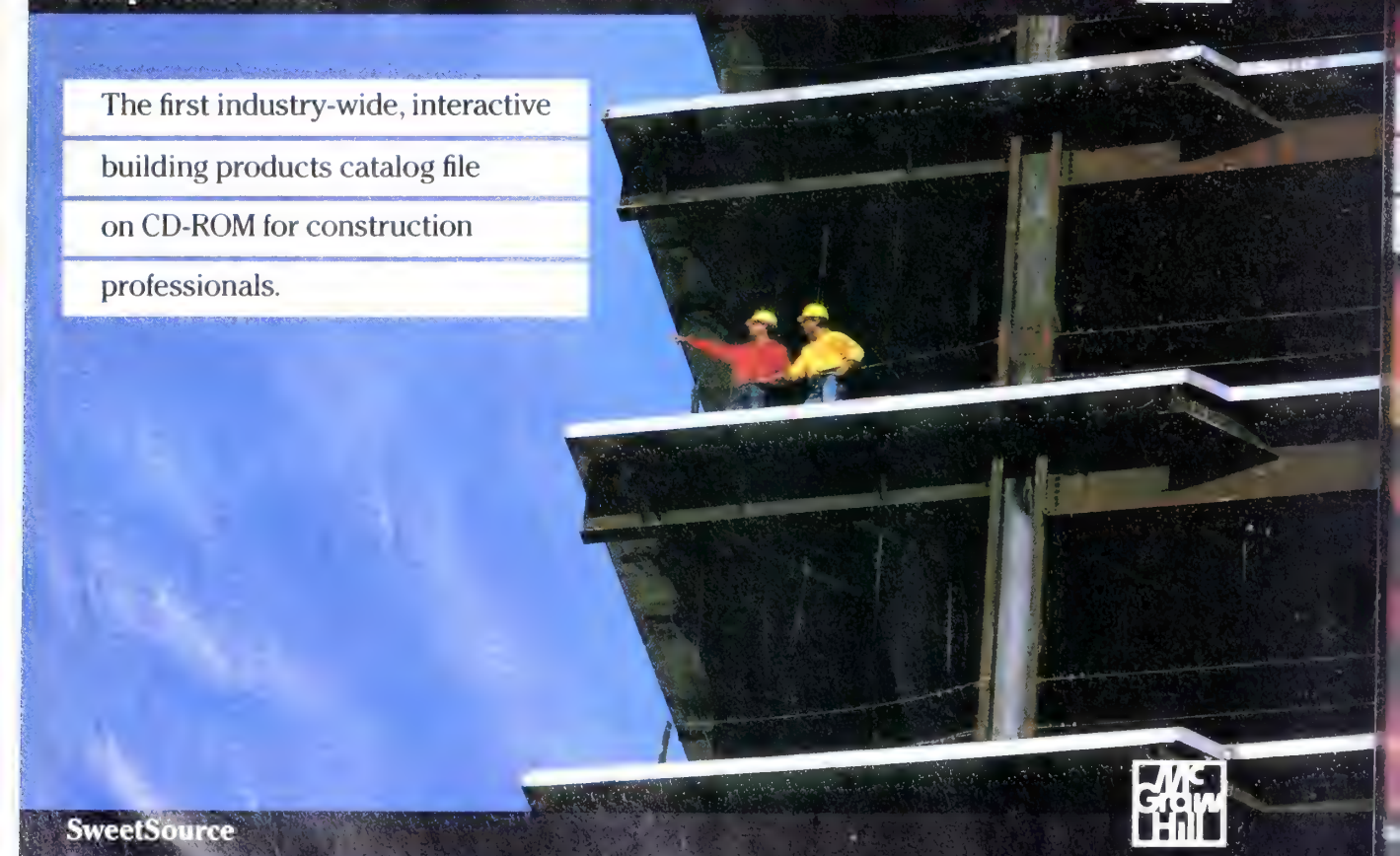

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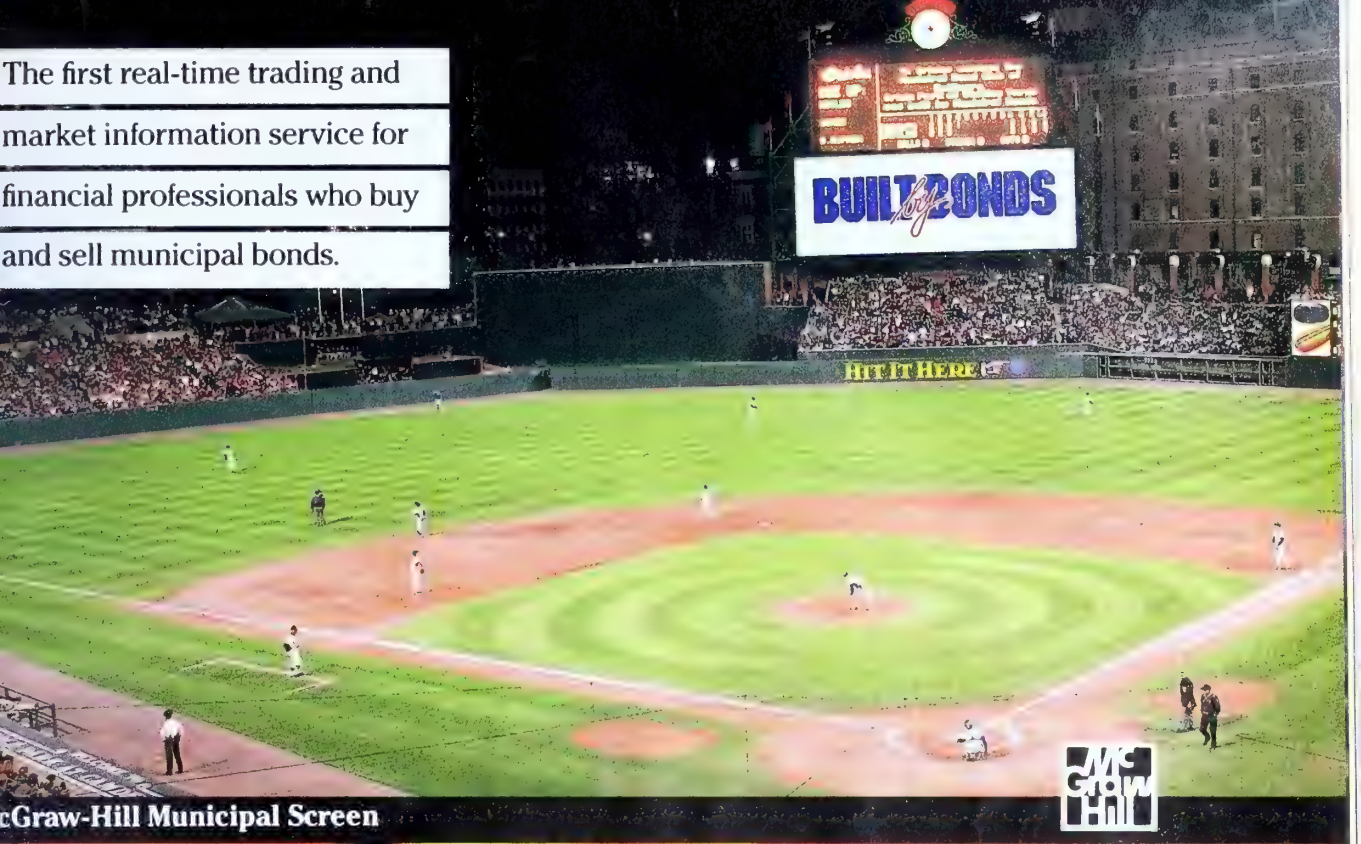
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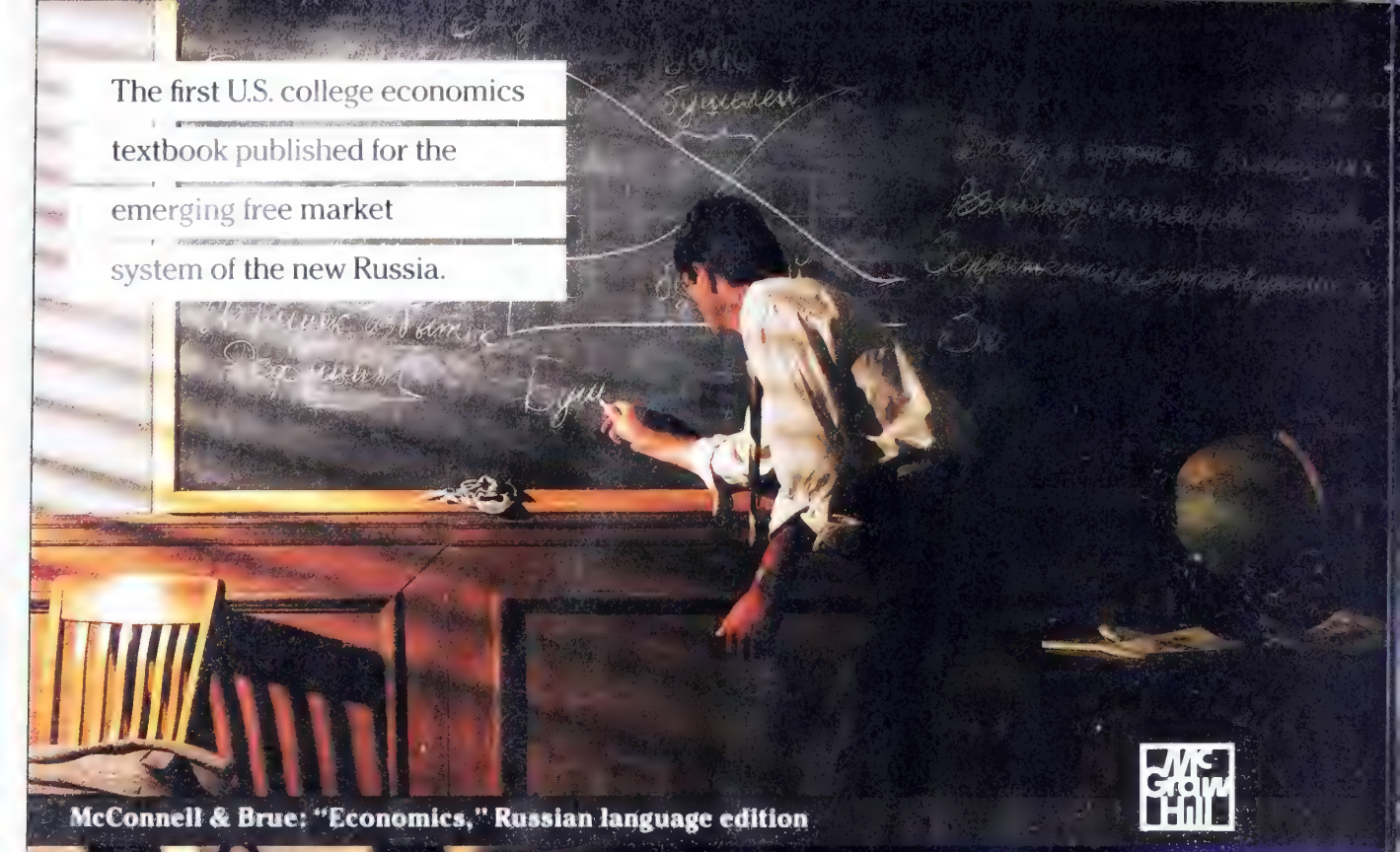

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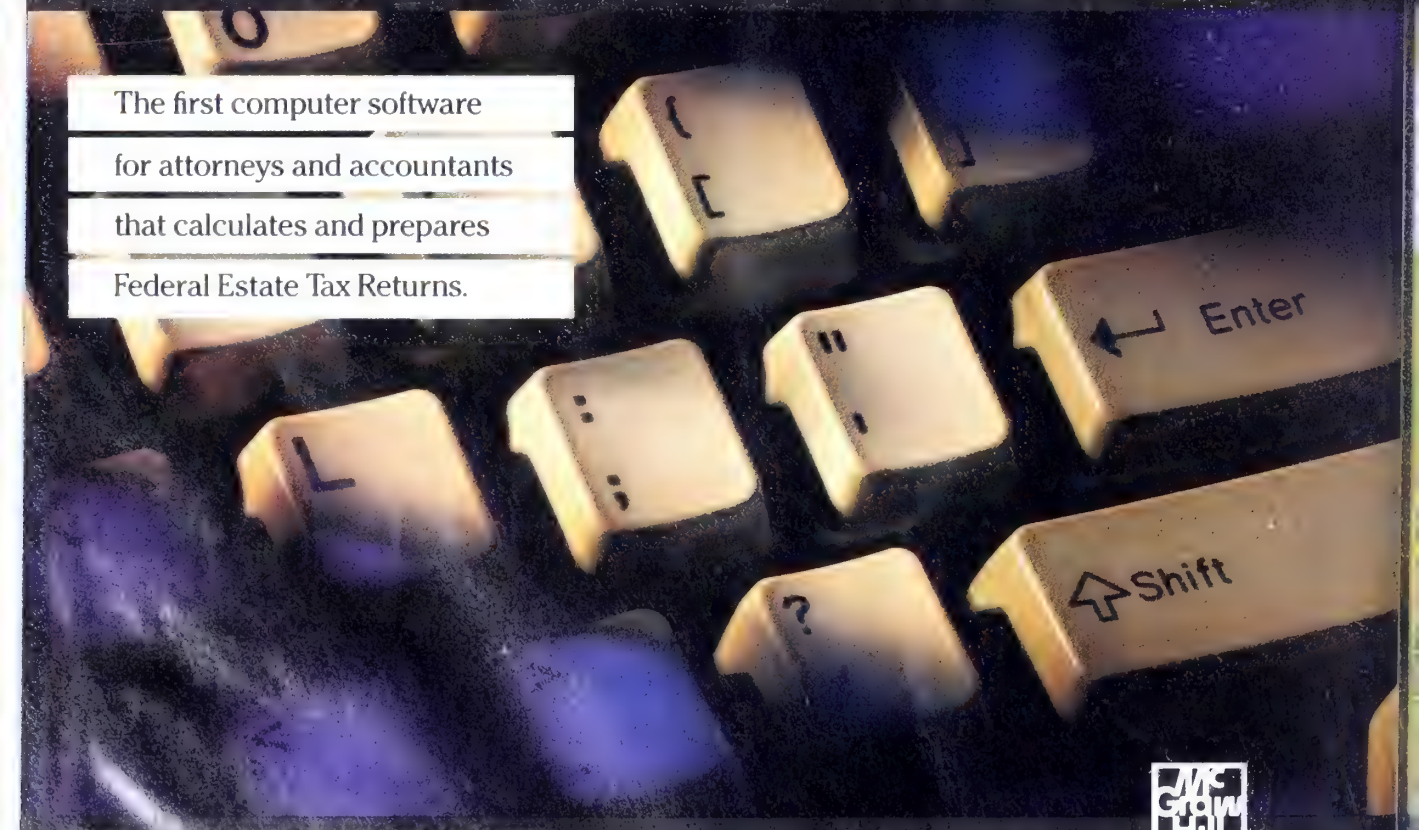

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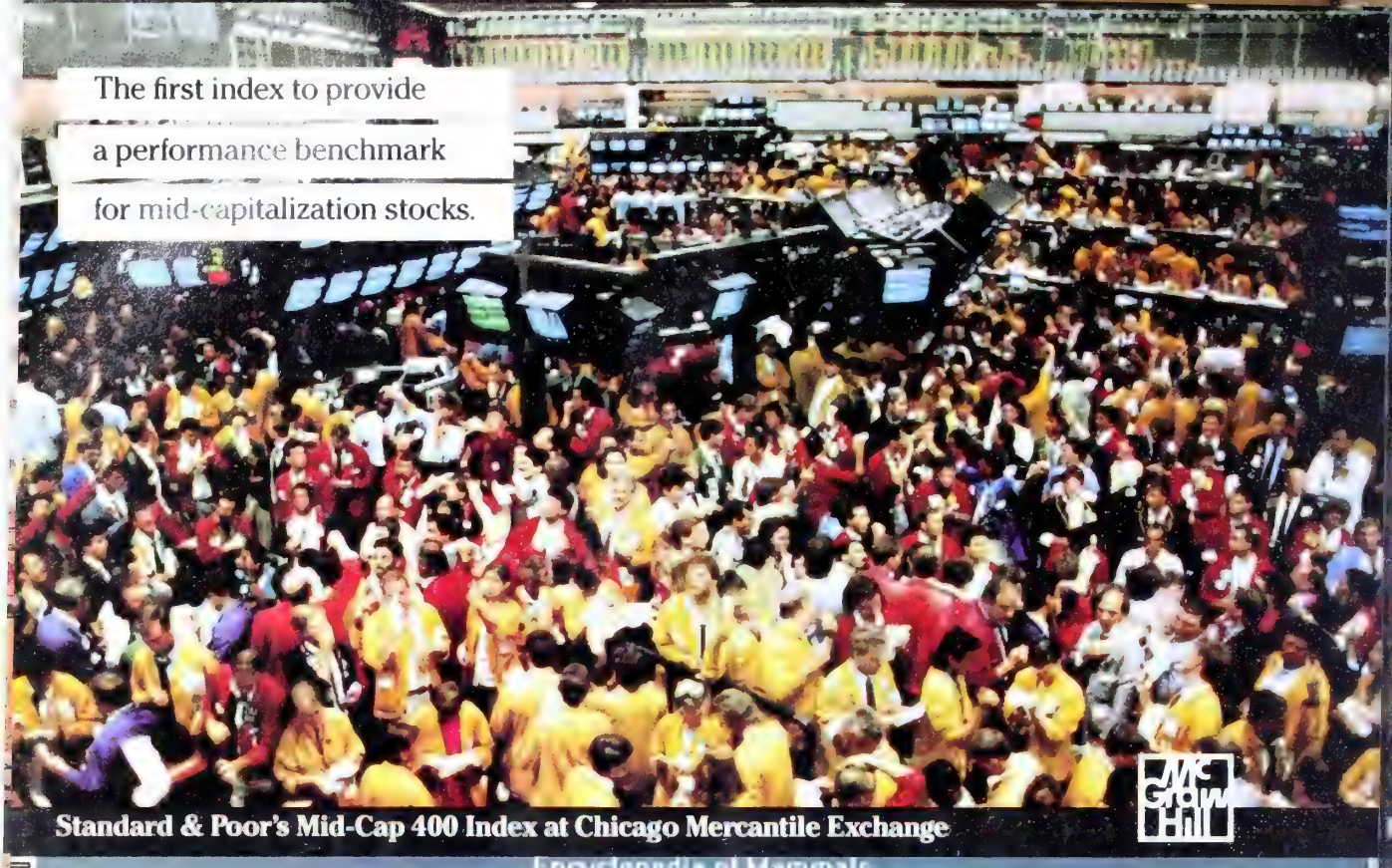

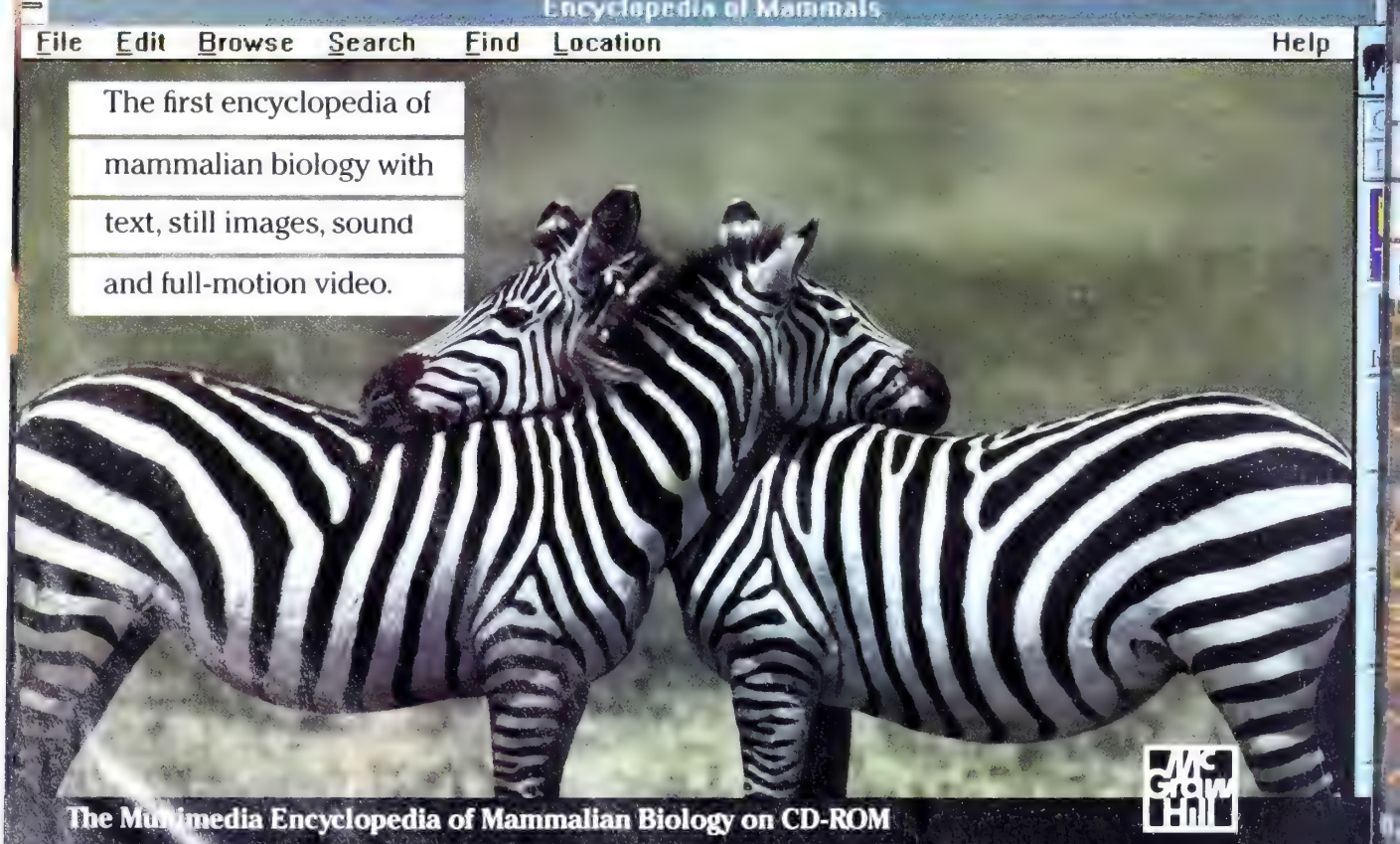

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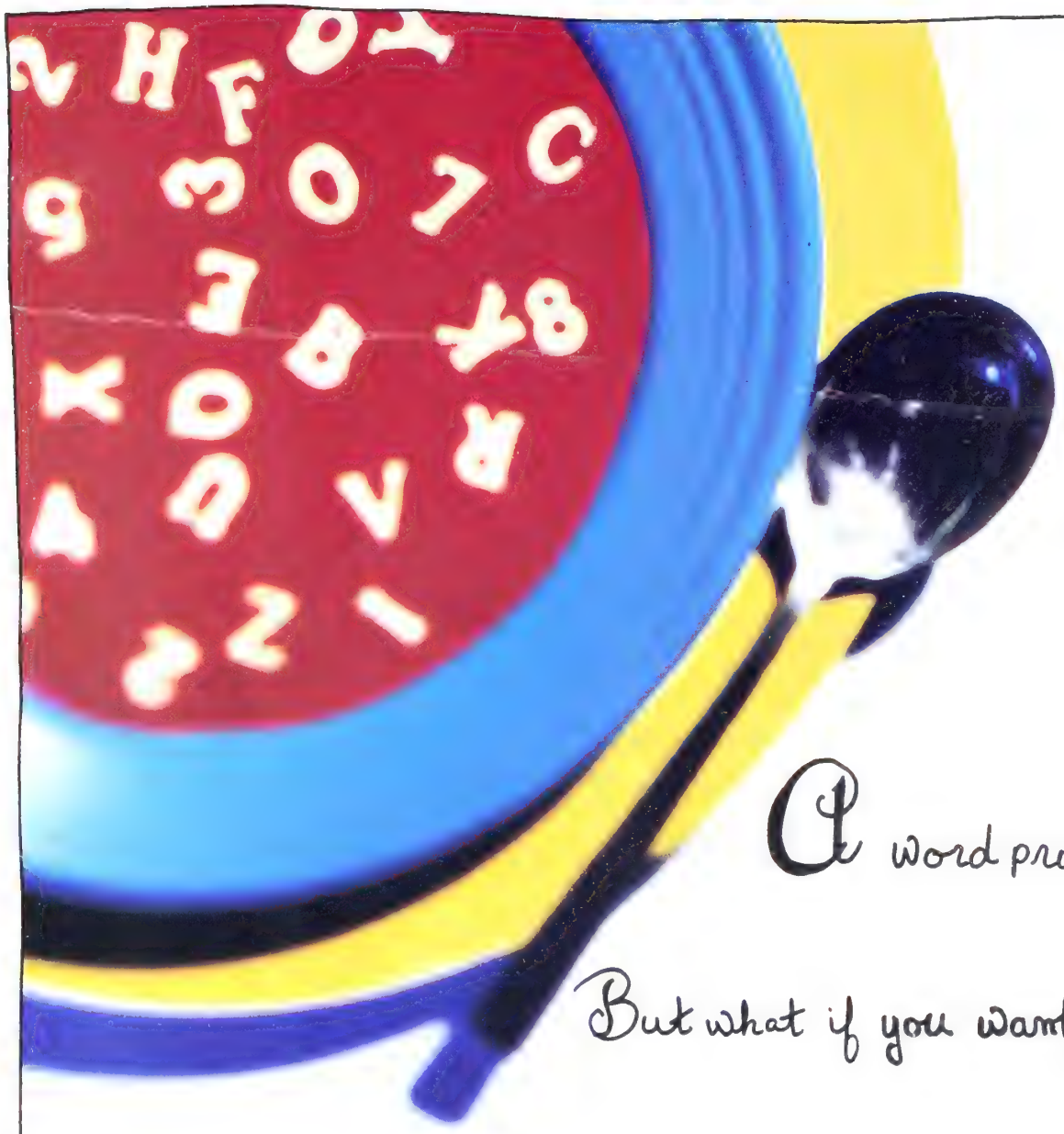

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BusinessWeek

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JOHN SCHNATTER'S EFFORTS TO MAKE A BETTER PIZZA HAVE TAKEN HIS PAPA JOHN'S CHAIN TO THE TOP OF THE LIST OF HOT GROWTH COMPANI

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92 HOT GROWTH COMPANIES
They're nimble and innovative. Some are first with their product, some are simply better or leaner. All have high hopes and are off to healthy starts. There are 100 of them, ranked in order, and you need to know who they are, what they're up to, and how they got to where they are

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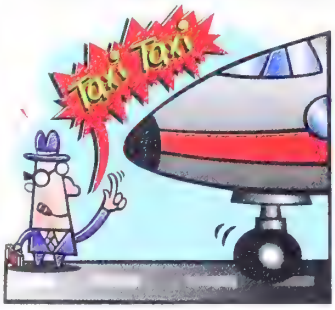
Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

MONCHOS

THEY LOVE TO FLY, AND IT SHOWS



Corporate chieftains go out of their way to justify their fuel-and-cash guzzling jets, even for unreimbursed personal trips. Examples:

▶ Georgia-Pacific CEO Marshall Hahn cut back from his $177,440 worth of private use of GP's eight planes in 1992 to a mere $68,000. But A. D. Correll, who succeeded him in December, is catching up: His jet perks soared from $18,620 to $49,000. GP says the board ordered such use.

▶ Vernon Loucks, chairman of troubled Baxter International, cites "security" concerns as the reason he racked up $79,000 in personal jet time. But one shareholder at the Apr. 29 annual meeting asked whom Loucks feared—not rivals, he said, with business so bad. And not Arab terrorists: Baxter pleaded guilty to supplying info to the Arab boycott of Israel. So, the gadfly said, it must be "shareholders in this room." Baxter insists Loucks gets threats, even from employees.

▶ General Dynamics reimbursed board members Lester and James Crown $152,974 in 1992 and 1993 to fly in using their own Cessna from Chicago. Since GD wasn't sending its own craft round-trip, James reasons they were "saving the shareholders money." The cost for them to fly first-class on United for all 24 meetings those two years, using current fares, is $52,800.

▶ Syntex Chairman Paul Freiman, who logged $98,000 in jet time in 1992, is thriftier lately, though. The latest proxy shows nothing on '93 jet use. *Joan O'C. Hamilton*

SLUGFESTS

CALL HIM A SOMEWHAT FRIENDLY WITNESS

General Electric is taking an unusual tack to secure testimony of a key witness in its diamond-price-fixing trial, set for Oct. 11. Peter Frenz, its European sales manager for industrial diamonds, won't appear. And since German national Frenz lives in Frankfurt, the U.S. Justice Dept. can't compel him to do so. Frenz and his co-defendants GE and Swiss-based De Beers Centenary say they are innocent. Frenz says he doesn't want to endure a trial.

GE has urged Frenz, in vain, to appear. Now, GE is asking the court to allow him safe passage or to testify on videotape. Justice is likely to oppose the idea. Diamond producer De Beers so far is a no-show, too. *Zachary Schiller*

TALK SHOW

It was a misconception that we wanted to lower the value of the dollar.

—Treasury Secretary Lloyd Bentsen, when asked if the U. S. had changed its policy to make the dollar stronger

AIRPLAY

DO BROADCASTERS WANT THEIR HDTV?

America's leapfrog over the Japanese and Europeans in high-definition TV is being trumpeted as a major victory for U. S. technology. With the U. S. method, one HDTV channel would be broadcast over a 6-megahertz band.

One big problem: U. S. broadcasters are losing interest in HDTV because they could more profitably cram a half-dozen conventional TV channels or vast amounts of data transmissions into that single HDTV band. The National Association of Broadcasters is resisting plans to lock in the HDTV standard developed by an alliance including Zenith Electronics, AT&T, and General Instrument. Saying there's no need to rush HDTV, the NAB wants to check out a European scheme with a supposedly sharper signal.

That would take until early 1995, around when the HDTV standard goes to the Federal Communications Commission for its O. K. FCC Chairman Reed Hundt insists he won't delay the standard without hard evidence the European system is superior. And he pledges that the broadcasters will use their new bands for at least some HDTV. *Peter*

HDTV TEST CENTER: *U. S. broadcasters still need persuading*

REALITY CHECK

ALAN BLINDER SAYS he isn't soft on inflation. At his May 6 Senate confirmation hearing, the Clinton Administration's nominee for Federal Reserve Board vice-chairman rebutted Wall Street suspicions by quoting from his 1987 book, *Hard Heads, Soft Hearts*. Here's what Blinder, a former BUSINESS WEEK columnist, read to the tors: "Inflation does indeed bring losses ciency. It also makes peopl insecure and unhappy. We wou doubt be better off without it."

SELF-EDITED

IN REALITY, Blinder quoted himself out of context. In the same passage, he downplays inflation in the U. S. and other industrial nations in modern times as "more like a bad cold than a cancer on society." He also scores those who "prescribe the economic equivalent of lobotomy [high unemployment] as a cure for the inflationary cold." This misunderstanding, he writes, "blows the political importance of inflation out of all proportion to its economic importance." And he labels as a "myth" the "notion that inflation has a built-in tendency to accelerate" —one reason Fed Chairman Alan Greenspan gives for recent rate hikes. *Dean Foust*

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994 Berger Associates, Inc. BW 52394

TOTAL ANNUAL RETURN FOR THE PERIOD ENDING 3/31/94 & MORNINGSTAR RATINGS

Berger 100 Fund	Berger 101 Fund
1 Year 15.6%	1 Year 11.4%
3 Years ★★★★★† 21.9%	3 Years ★★★★★† 18.7%
5 Years ★★★★★ 24.6%	5 Years ★★★★★ 16.3%
10 Years ★★★★★ 18.8%	10 Years ★★★★ 13.2%
15 Years 16.7%	15 Years 13.6%
19.5 Years†† 15.6%	19.5 Years†† 13.9%

Source: Lipper Analytical Services, Inc. †Morningstar proprietary ratings reflect historical risk-adjusted performance through 3/31/94. The ratings are subject to change every month. Morningstar ratings are calculated from the funds' three-, five- and ten-year average annual returns in excess of 90-day Treasury bill returns with appropriate fee adjustments and a risk factor that reflects fund performance below 90-day T-bill returns. Ten percent of the funds in an investment category receive five stars and 22.5% receive four stars. ††Berger Associates assumed management of the Funds 9/30/74

Up Front

MADE IN JAPAN

SONYS, NISSANS—AND GUNS

Here's some blow-you-away news: Japan is the second-largest exporter of guns and ammunition to the U.S. According to the U.S. Customs Service, Japan shipped $76 million worth of guns and ammo to the states last year, a level exceeded only by that of China, with $108 million worth. No. 3 is Britain, followed by Italy and Germany. High-quality Japanese arms cost a lot, so Japan actually is sixth in quantity shipped (with China still first in volume). Japan's 160,472 guns sent last year are less than 1% of the U.S. market.

LOADED: *Japan sends high-quality firearms*

Don't worry: Japanese firearms have little to do with street crime in the U.S. They're mostly rifles and shotguns for hunting and target-shooting. The biggest source is Miroku Firearms Manufacturing, whose guns are marketed by Browning.

China last year exported 964,903 guns to the U.S., mainly low-end SKS and MAK-90 rifles for hunting and range-firing. Tim Brown, manager of Gun Shack in Mt. Airy, Md., says Japan's bolt-action Browning ($400-plus) outsells the SKS ($129), which hunters find less accurate.

Amy Borrus and Neil Gross

ON THE FUND FRONT

'HEY, MOM, THINK I SHOULD SELL SOME SHARES?'

Lots of parents and grandparents start mutual-fund accounts for children, but how would you explain something like the Fidelity Magellan Fund to a 10-year-old? SteinRoe funds will soon launch the SteinRoe Young Investor Fund, a mutual fund that will invest at least 65% of its assets in "kid-related" companies. While the fund is not yet operating, its list of potential investments would include Disney, Gap, and Toys 'R' Us.

Liberty Financial Services, SteinRoe's parent company, says the fund's mission is educational and financial, with separate shareholder reports for youngsters. Perhaps some Peter Lynch wannabes can explain investing to Mom and Dad. Legally, it takes an adult to buy a fund.

The fund's minimum buy-in is $1,000, or $500 for those with automatic monthly investing of at least $50. That's a little steep for the piggy-bank crowd, but fund officials say smaller accounts would drive fund expenses too high. The fund even has its own toll-free number: 1 800 403-KIDS. *Jeffrey M. Laderman*

DRAWN AND QUARTERED

AFTERLIVES

MAYBE HIS FACE SHOULD BE ON MILK CARTONS

Where in the world is Victor Incendy? He vanished in November, 1991, leaving prosecutors puzzled. An indictment by the Manhattan District Attorney's office says the Cascade International CEO inflated the retail chain's number of outlets and profits, defrauding such lenders as Bank of Scotland, which is out $10 million. Shenanigans at the now-defunct Boca Raton (Fla.) retailer left creditors with around $25 million in bad debts and stockholders wiped out. The feds have issued no indictment to da but are still investigating.

INCENDY: *Gone with the wind*

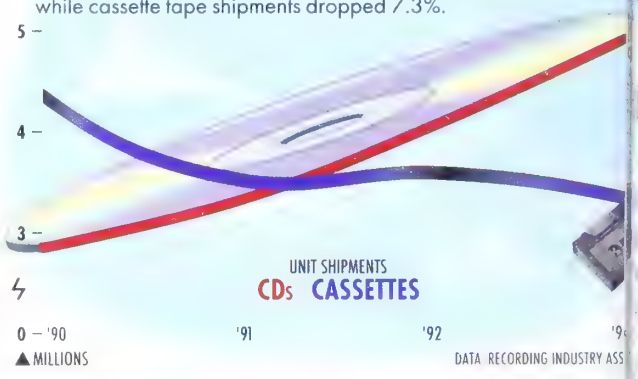
The trail is so cold th probers only can specula about the whereabouts of cendy, last seen in South Fl ida. One rumor: Eastern E rope. (He's said to be Hungarian native). Anoth puts him near his Florida haunts. Th have only bagg John Sirmans, a C cade vice-preside under Incendy who serving a one- three-year sentenc

There's a possi clue. Last summ someone—it's uncle who—sold Incendy's wat front condo in Boca $230,000. Maybe that will l prosecutors to the will-o'-t wisp Incendy. *Gail DeGeo*

THE BIG PICTURE

FACE THE MUSIC

Remember when compact disks were for audiophiles? No longer. Almost half of American households now have CD players. The number of CDs shipped last year to music outlets increased 21%, while cassette tape shipments dropped 7.3%.



FOOTNOTES

Change in home prices during 1993, in Denver: up **12.7%**. In Nashville: up **7.0%**. In Los Angeles: down **11.7%**

ORD TAURUS
AMERICA'S EST-SELLING CAR. AGAIN.*

kip the coffee. There's no better to begin the day than with erious dose of Taurus SHO. ht there in your garage is a valve caffeine-free wake-up l. But the SHO's stimulating alities are not limited to its formance alone.

HO's sleek good looks are a otle hint at the power that lies within. Then, behind the wheel you'll notice that the driver-oriented instrumentation and articulated bucket seats are designed so your attention stays on the road.

EYE-OPENING PERFORMANCE.

This 220-horsepower eye-opener will turn your commute into the ideal way to enjoy speed-sensitive variable-assist steering and the newly refined four-wheel sport-tuned suspension. And since the power of SHO's 24-valve DOHC engine is balanced by a standard anti-lock braking system and dual air bags;** you'll be able to concentrate on a world-class driving experience.

Isn't it time to awaken the performance driver within? Ford Taurus SHO. Your commute will never be the same.

*Based on 1993 CY manufacturer's reported retail deliveries
**Always wear your safety belt

HAVE YOU DRIVEN A FORD LATELY?

Ford

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Readers Report

WHAT PRICE THIS NEW FRONTIER?

Your article "Digital Pioneers" (Cover Story, May 2), was replete with references to the ambitious dreams of interactive entrepreneurs and their expensive development and production costs. But a final product has yet to be tested on actual consumers. And nowhere in the article is the cost to the consumer mentioned.

"If we build it, they will come" is a dangerous assumption in a decade where most customers have shown themselves to be increasingly sensitive to price and value. "If they need it, they will come" appears more to be the current order of the day.

Denis M. Katchmeric
Annandale, Va.

I just read your article, and I was astonished to see that Rand and Robyn Miller, the creators of *Myst*, were not mentioned.

Myst is the closest thing to virtual reality yet produced and has upped the ante for anyone setting out to create interactive entertainment.

James T. Pendergrast
New York

IF IT AIN'T SICK, DON'T CURE IT

Regarding your story "Health-care markets are working again" (Editorials, May 2). Finally someone else has noticed what the employee-benefits industry has been saying for so many months: There is no health-care crisis that warrants a major national overhaul of the existing system.

Recent innovations in managed-health-care programs are yielding impressive results in keeping costs under control. Preferred-provider organizations already allow small businesses to effectively pool their resources to purchase low-cost insurance. In addition, state mandates have gone a long way toward eliminating exclusions and preexisting-condition problems.

Of course, much fine-tuning still needs to be done. But the basic system working.

Tony Nova
Bala Cynwyd, P

CORRECTIONS & CLARIFICATIONS

In "Steve Dworin tries to reach out and save Ayer" (Marketing, May 16) we erroneously identified the director of advertising services at AT&T. He is Robert Watson.

The Executive Compensation Scoreboard (Special Report, Apr. 25) should have noted that Dennis H. Chookaszian and Philip L. Engel are chairman and president, respectively, of CNA Insurance Cos., not CNA Financial Corp. Mattel Inc. CEO John W. Amerman's salary and bonus did not fall, as reported, but was up 17% from last year. His pay was based on a 26% rise in profits, before a pretax charge of $115 million because of the merger with Fisher-Price Inc..

UNHERALDED AT LOWE'S

Your article on Lowe's Cos., "The do-it-yourself store is really doing it" (The Corporation, May 2), gives long overdue recognition to one of the great success stories in American retailing. It is surprising, however, that the article does not mention Leonard G. Herring, president and CEO of Lowe's since 197

Herring has fostered an environment that has enabled approximately 30,0 owner/employees to register the accomplishments that warrant note by your magazine.

Harvey L. Benenson
Lyons Benenson & C
New Yo

WHO SHOULD BE IN THE BOARDROOM

In reference to your article "Boardrooms: The ties that blind?" (Legal Affairs, May 2), as an executive-search consultant for 30 years, I agree that a company should never put its inve

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*W*HY THE ALMIGHTY DOLLAR ISN'T THE ONLY MEASURE OF SUCCESS.

*O*rville and Wilbur Wright may have been dreamers, but they were not fools. Shortly after their first flight, a cousin of a friend of a friend — namely, Senator Henry Cabot Lodge — sent a letter on their behalf to the War Department. The letter suggested that "it would be eminently desirable for the United States Government to interest itself in this invention." The government passed. Flying was, at best, a sport. The Wrights' business advisors promptly led them to European leaders, and again wrote letters and made appointments on their behalf. This time, the American inventors were met with enthusiasm. In fact, foreign governments purchased planes not only from the Wright brothers, but from other manufacturers whom they inspired into the flying business, as well.

A surprisingly old idea: Making a dollar by making a franc, or a pound, or a yen. Of course, the global economy has been there all along. We've just become far more sophisticated about it. Certainly more inclined to exploit it. And the rise of intermodal transportation is one reason why. The fact is, few things can affect your company's overall performance as much as transportation strategy. A good one creates value; a poor one fritters it away. And now, that strategy must include a response to the "new" global marketplace.

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Innovation i

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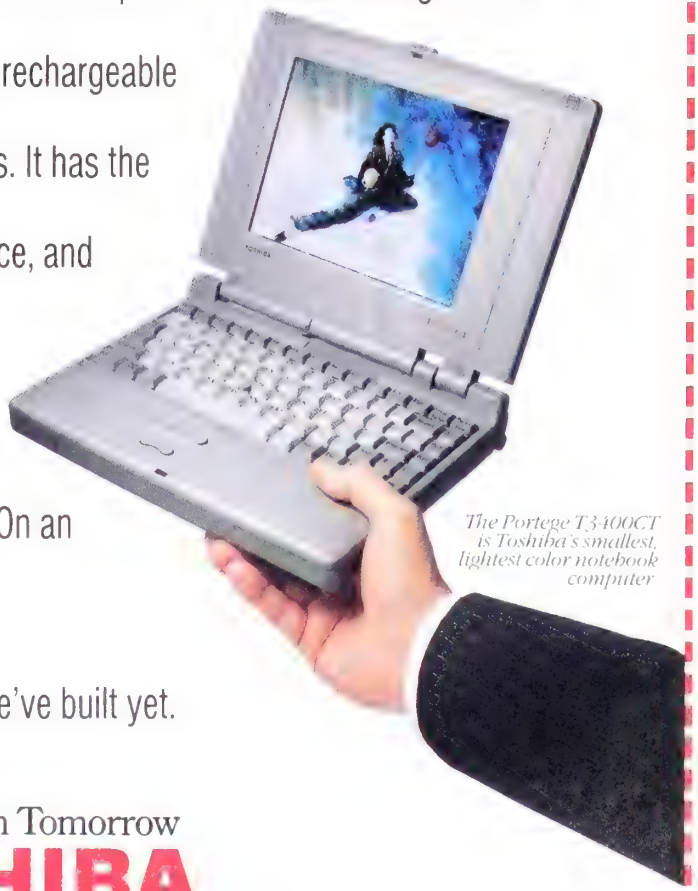

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Giftrust Investors	23.1%	25.1%	23.6%	—	20.2% *(11/25/83)*
Heritage Investors	6.2%	14.6%	—	—	16.8% *(11/10/87)*
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[3] The Standard & Poor's 500 (S&P) Index is an unmanaged group of stocks considered to be representative of the stock market in general.

Readers Report

ment banker, commercial banker, or a torney on its board."

However, I disagree with the infe ence that bankers, attorneys, or eve consultants would not be effective boa members. For almost five years, served on the board of UCCEL Corp., Dallas software company subsequent acquired by Computer Associates In A condition of serving on the board w that I would not conduct searches f the company.

I also had to recuse myself from a signments from UCCEL competitors. was a great five years, and I belie the company benefited from my bei on the board. And I [benefited fro the experience of being "inside."

Frederick W. Wacker
Partn
McFeely Wackerle Shulm
Chica

MALAYSIA'S RECORD ON ANTI-SEMITISM

Malaysia's animosity toward Jew and Israel predates Prime Min ter Mahathir bin Mohammad's ban *Schindler's List* ("Malaysia's Mahath Leading a crusade against the Wes International Outlook, Apr. 25).

Malaysia has a long history of stat sponsored anti-Semitism. Prime Min ter Mahathir has a habit of speaking "Zionist plots," and "international Jewi media" and even opposes the perfo mance of works by Jewish authors a composers.

Although Israel's relations with oth Southeast Asian nations are steadily i proving, Malaysia is one of the large non-Arab countries adhering to the Ar boycott of Israel. Israelis are prohibit from entering Malaysia, and Mala from visiting Israel.

Abraham H. Foxm
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Anti-Defamation League of B'nai B'r
New Yo

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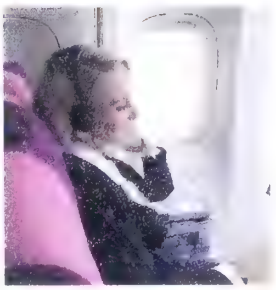

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Roberts Electric *Nine years in a row. The absolute best time of our lives.* *David Waugh, Vice President*

Flamingo Hilton Las Vegas *Fishing at Waterfall is the ultimate and I can prove it. This year will be my sixth return visit to this beautiful resort....Atmosphere, service, camaraderie, relaxation ....the Ultimate* *Horst Dzuira, President*

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Huntsman Chemical Corporation *Waterfall Resort is the finest fishing resort in the world. I bring a group of 20 guests every year.* *Jon M. Huntsman, CEO*

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IE BUFFOONS F SUMMER

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ey're the owners—the most para- l collection of capitalists ever . Although successful individually, ner they're barely breaking even business whose revenue has more doubled in the past decade. The

ts of their sorry d? Ego, greed, and ndying belief—held ch and every one—signing just one multimillion-dollar will win them the Series.

at's the way John r views the hardball ess in *Lords of the : The* Real *History seball.* In Helyar's , baseball's "lords" e in enough skul- ry, artifice, warmon- , and fratricide to the War of the Ros- k like a church so- From their skybox e rooms, they're forming baseball from a game of s and great moments into a pitiful blage of millionaire athletes bicker- ith billionaire bosses while the loses relevance for its fans.

ne might say that's nothing new. rs and players have always fought, ans have always decried the sordid ess of running this elegant game. r, who previously co-authored *Bar- ns at the Gate*, tips his cap to that ment by opening with a page of s expressing befuddlement with usiness of baseball, from the likes ner A. G. Spalding in 1890, Ty in 1925, and Atlanta Braves owner Turner today. Turner to his fellow rs: "Gentlemen, we have the only monopoly in the country and we're it up."

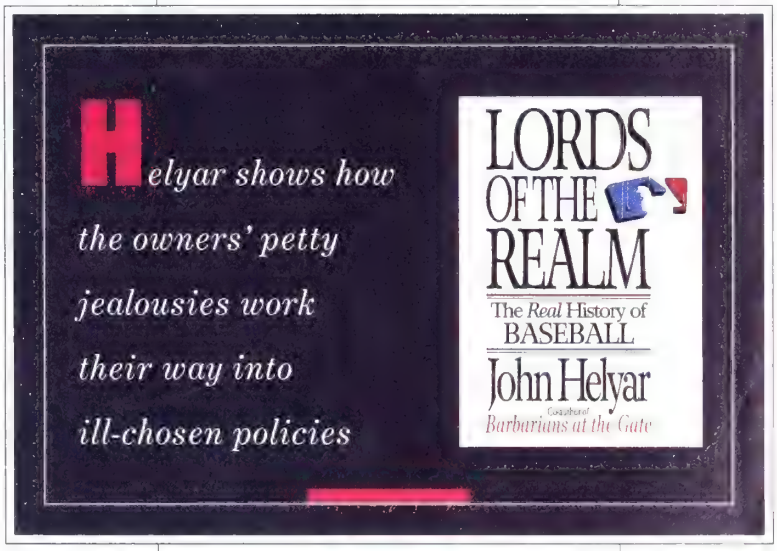
hat's new about the situation is Once, the games between the lines were virtually all that mattered. Today, salaries, ownership changes, broadcast rights, and divisional realignment dominate the headlines. Therein lies a loss for people who love the sport. And therein lies Helyar's purpose: to help those people understand how the people who "own" baseball are wrecking it.

Who are these screw-ups? As Helyar portrays them, they fall into three types. The first consists of such legends as the Dodgers' devious visionary Walter O'Malley, the Cardinals' labor-baiting tightwad Gussi Busch, and the A's iconoclastic showman Charlie O. Finley. That venerable group was replaced by dysfunctional arrivistes typified, in Helyar's view, by buffoon Turner and blowhard George Steinbrenner. And the sport is run now, he tells us, by bloodless moguls such as the White Sox's calculating Jerry Reinsdorf and Milwaukee's earnest Bud Selig, who has been "acting commissioner" for 18 months.

If the owners are bad, Helyar argues persuasively, the commissioners are worse. Bowie Kuhn he depicts as a pompous, ineffectual tool of O'Malley's. Peter Ueberroth comes off as an arrogant, power-hungry control freak who led owners into a costly collusion conspiracy even as he won them a landmark $1 billion TV package with CBS. A. Bartlett Giamatti was a wide-eyed fan. His hastily chosen successor, Fay Vincent, rose to be a tyrant and got canned mostly because owners found him soft on labor when they were ready to go to war, Helyar says.

By contrast, labor chieftains Marvin Miller and Donald Fehr are heroes. Indeed, Helyar's pejorative use of the word "lords" rather than "owners" throughout the text betrays a pro-labor bias that becomes annoying as he glosses over the union's mistakes and problems. He chooses not to examine the costs of the union's refusal to consider a closer relationship with owners along the lines of basketball's successful model. And he refers only in passing to the growing split between baseball's multimillionaire stars and its workaday players—those poor souls struggling to survive on the minimum major-league salary of $105,000 a year.

Helyar strives admirably to take readers behind baseball's closed doors, and he has a sharp eye for detail and a knack for artful storytelling once he gets there. He gives us new insight into the convoluted internal politics at the top of the sport. To his credit as a reporter, he's able to pierce the clubby facade of the owners and show the reader how their shifting alliances and petty jealousies work their way into baseball's often ill-chosen policies.



Still, such recent events as Vincent's ouster, the adoption of a revenue-sharing plan, and the search for a new commissioner have been so closely reported that even Helyar's rigorous work doesn't make them fresh. And while the book's a good read, Helyar has overloaded it with sports clichés. Union activist Bob Boone "took a deep breath, as if relaxing himself for a 3-2 pitch." Football union chief Ed Garvey "fumbled away free agency." "The money ball bounced on." And so on.

Helyar closes with a bittersweet epilogue. The scene is the 1993 All-Star Game at Baltimore's brand-new Camden Yards stadium. Tickets are scalped for $500. Crowds pour into FanFest, an interactive exhibit where "Walt Disney meets Cooperstown." Giant TV monitors replay some of the game's great moments. "And the fans, ever forgiving, were still there," Helyar writes. No matter how badly the lords perform, the magic of baseball endures.

BY DAVID GREISING

Atlanta bureau manager Greising is teaching his son the tomahawk chop.

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LET'S DEFUSE THE POPULATION BOMB —WITH FREE MARKETS

BY GARY S. BECKER

The Malthusian doomsayers may have it wrong again. What's needed is not more birth control but more economic growth and education

GARY S. BECKER, THE 1992 NOBEL LAUREATE, TEACHES AT THE UNIVERSITY OF CHICAGO AND IS A FELLOW OF THE HOOVER INSTITUTION

Parson Thomas Malthus is alive and well and living at the U.N. Rising population is on a collision course with limited growth in food supplies and other life-sustaining resources. That may sound like a sentence from the 1798 Malthus classic, *An Essay on the Principles of Population*, but it was in fact one of the themes at a recently concluded U.N. conference that paves the way for a massive meeting on population next September in Cairo.

One hotly debated proposal at the conference calls for quadrupling—to more than $4 billion—the amount the U.N. gives to poor nations for family planning programs. But a study by Lance Pritchett of the World Bank in the March, 1994, issue of *Population and Development Review* makes a persuasive case that people in poor countries have lots of children because they want large families, not because they don't know about birth control.

Families in Third World countries still typically have more than six births because children are put to work at an early age. But even poor parents have fewer children, however, when they have the right incentives. As nations develop, attitudes change: Families come to prefer having fewer and better-educated children who can prosper in modern economies. Economic development and the education of women, not family planning programs, are the most effective contraceptives.

BETTER OFF TODAY. But many biologists, ecologists, and others who disagree envision disaster unless the population surge is contained by more radical means. They are concerned because the world's population since 1950 has more than doubled—to 5.5 billion people—and is projected to double again, to 11 billion, by the year 2055. That compares dramatically with the more than 100 years it took for the world's population to double after 1850, and more than 150 years to double that of 1700. They also worry that population growth since 1950 has been especially steep in the poorest Third World countries. The African population increased from 200 million people to almost 700 million, whereas Asia's total (even excluding Japan) increased from 1.3 billion to just over 3 billion.

Staggering increases. Yet I do not believe they are necessarily cause for alarm. Population density in Africa is still far below that in Japan, the Netherlands, Taiwan, and many other affluent countries. Moreover, the neo-Malthusians don't seem to understand that the typical Third World family is now much better off than 40 years ago. Per capita incomes in most of these nations have grown at good rates, although incomes in some Africa countries did decline during the 1980s or eve earlier. Third World populations expanded ra idly because children and adults live muc longer than they did even a few decades ag not because families there are having mo babies. They are having fewer babies. Ho can one lament population growth due to dr matically fewer deaths from malnutrition a contagious diseases?

Despite some terrible famines, nutrition h greatly improved in most Third World cou tries. Food is cheaper and more abundant d spite fewer acres in the world devoted farming. Rapid technological progress in ag culture and in the extraction of energy r sources has greatly increased availability food, oil, gas, and other natural resources.

EDUCATION PUSH. The pessimists respond th what happened in the past cannot continu and that production of food and fossil fue will be unable to keep up with the much lar er populations that are forecast for the ne century. Population growth may pose so potential long-run problems for the supply food and natural resources, but those pro lems have been greatly exaggerated scaremongers. In the past, countless proje tions about food supplies and natural resou es turned out to be far too pessimistic. For e ample, unforeseen technological improvemen reduced the cost of food and natural resourc during this century despite rapid growth both populations and industrial output th was expected by neo-Malthusians to sharp raise these prices.

Population forecasts have proved simila unreliable and have often simply extrapolat past trends. Birth rates fell far more rapi since 1950 than had been expected in Colo bia, Hong Kong, Mexico, Taiwan, and oth poor countries that had rapid economic dev opment, which greatly increased the edu tion and workforce participation of wom The population of African and other Th World countries will grow more slowly th is being predicted if these nations adopt market- education- and export-oriented p cies that succeeded for the Asian tige Chile, and other countries that grew out poverty.

The U.N. can best contribute to reduc population growth and misery in the Th World by offering sensible economic advice poor nations. The advantages of free mark and basic schooling for everyone in reduc the desire for large families should be major theme in the Cairo population con ence next fall.

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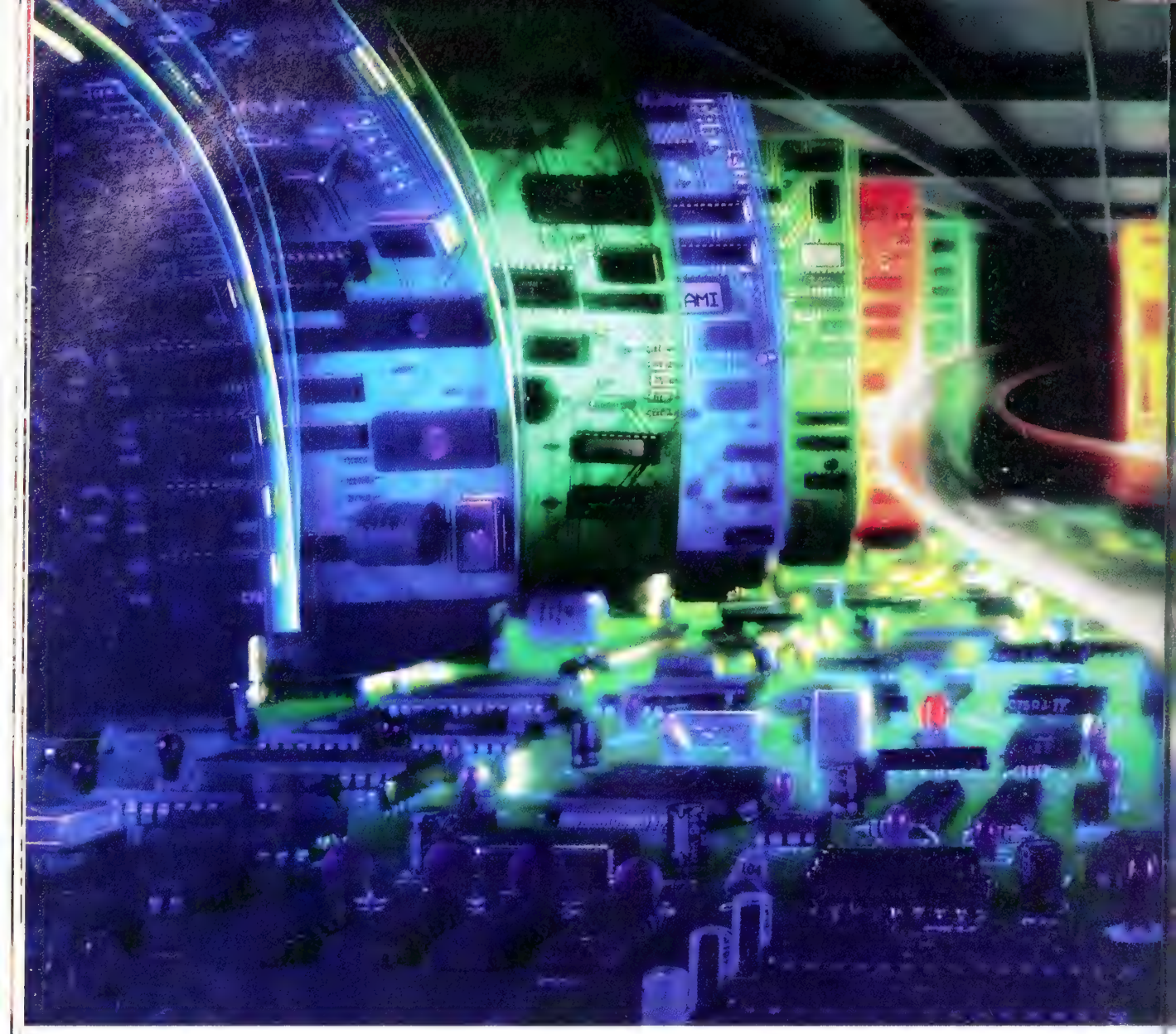

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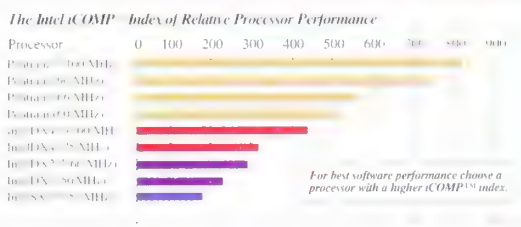

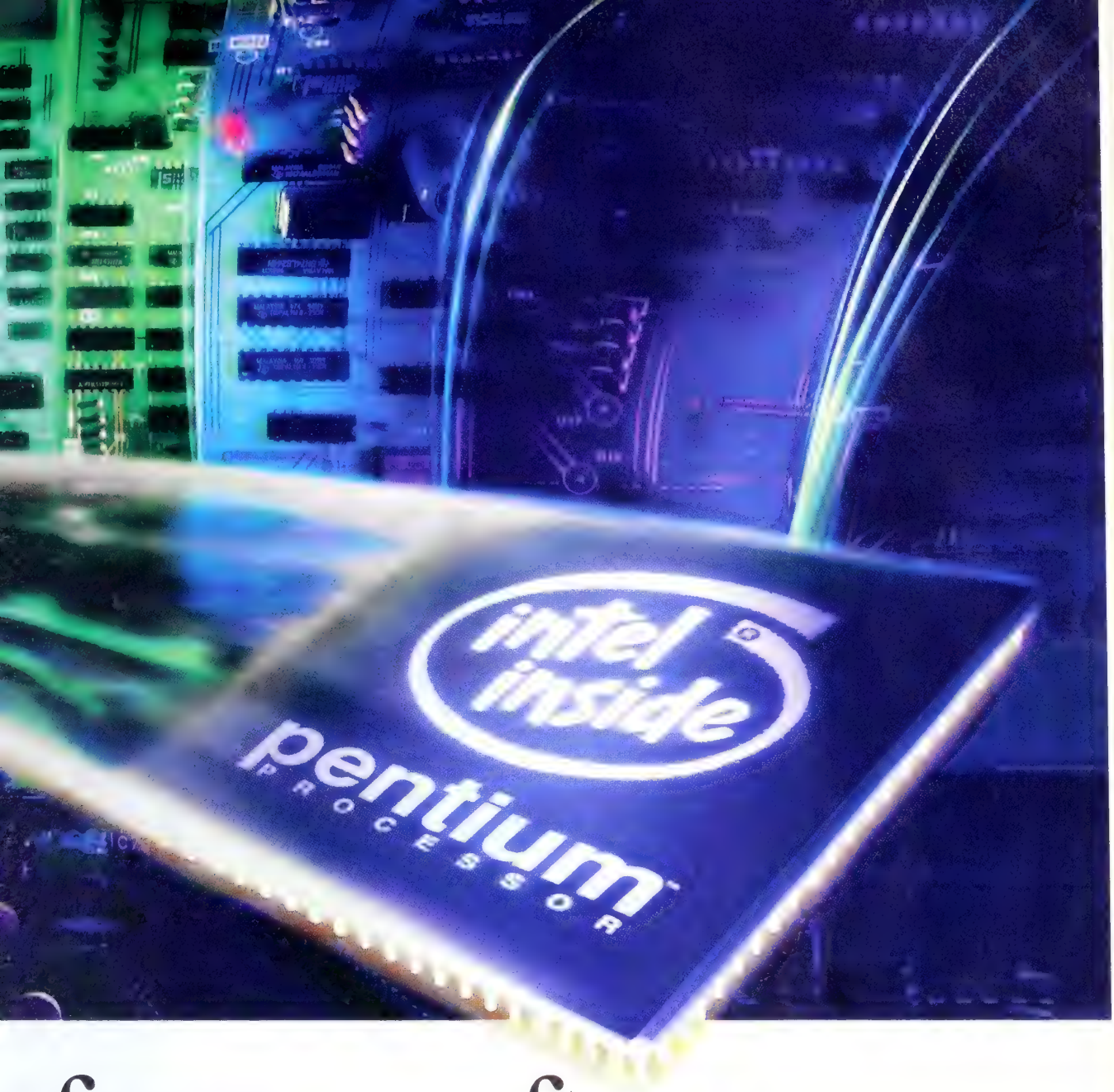

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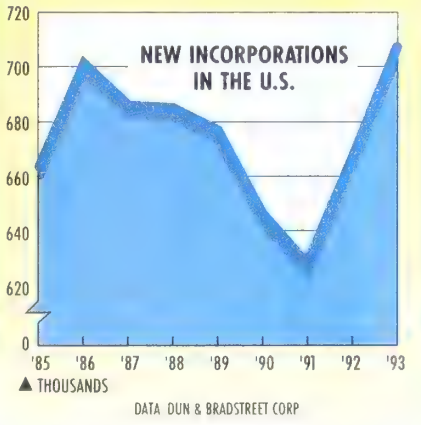
BY GENE KORETZ

BUSINESS STARTUPS ADD UP TO A BRIGHTER JOBS OUTLOOK

Last year's pickup in U.S. economic growth has been inspiring a surge in entrepreneurial activity. Dun & Bradstreet Corp. reports that new incorporations rose 6% in 1993, to the highest annual level in the entire postwar period. The increase in startups, the second in a row after four years of decline, "reflects growing confidence that the economic climate favors new enterprises," says D&B economist Joseph W. Duncan.

Another sign of a more benign economic climate is a sharp drop in the business-mortality rate. D&B's tally of business failures posted an 11% decline last year after rising for five straight years and has been running some 20% below year-earlier levels so far in 1994.

NEW BUSINESSES ARE ON THE UPSWING



DATA DUN & BRADSTREET CORP

These developments are reflected in government statistics. The Commerce Dept.'s index of net business formation, which is classified as a leading indicator, has been on an upward trend since mid-1992. And the Bureau of Labor Statistics has been steadily increasing the number of jobs it includes in its monthly payroll employment reports to reflect positions created by business startups missed by its surveys—from 75,000 jobs early last year to 115,000 earlier this year and 125,000 in April.

According to Duncan, it is new and small businesses that are largely responsible for the recent surge in employment gains. While all regions of the country registered increases in new incorporations last year, it's no accident that the Rocky Mountain region, which led the pack with a 14.1% rise, also came in first in job growth.

Such jobs in new businesses aren't necessarily fly-by-night affairs. A new D&B study traces the survival rate of companies founded in 1985, most of which began with fewer than 10 employees. Despite the intervening recession, Duncan reports that 70% of these businesses are still active in 1994. And almost 90% of this group have either added workers or employ the same number as they did when they began.

FOR A HEALTH-CARE PREVIEW, TAKE A LOOK AT HAWAII

In the ongoing debate over health-care reform, many groups have voiced fears that mandated coverage would spark a new explosion in health costs and imperil small businesses.

Are such fears realistic? In a recent report, the Government Accounting Office evaluates the experience of Hawaii, the one state to have implemented a mandated insurance program.

Since 1974, Hawaii has required all businesses to provide a basic benefits package, with employees required to chip in a maximum of 1.5% of wages for premiums. (In 1991, an average single worker earning a monthly wage of $2,010 shelled out about $30 a month; his or her employer contributed about $60.) At the same time, Medicaid covers the poorest Hawaiians, and a state program pays all or part of the cost of limited coverage for part-timers, low-wage earners, and others who aren't covered by Medicaid or employer plans.

How successful is Hawaii's health system? Somewhere between 93% and 96% of its residents enjoy health coverage, more than 80% via employer plans. Since the program wasn't intended to hold down costs, it's no surprise that per capita health care spending in the state (by employers, government, and the public) has risen at the same heady pace as in the nation as a whole.

Private health insurance premiums, on the other hand, have risen more slowly and were about 23% below the U.S. average in 1991—an achievement the GAO attributes mainly to the fact that premiums are not pushed up by cost-shifting by providers to pay for the medical expenses of uninsured people.

The GAO also finds no evidence that mandated insurance has harmed small businesses in Hawaii. In fact, most small businesses express general satisfaction with the insurance system. And although they complained about high health-ca costs and taxes, more than half of sm companies surveyed last year felt th inflation of their health-care costs wa under control.

A ROBUST ECONOMY CAN HELP CURE A SICK ENVIRONMENT

In recent years, a number of econ mists have questioned the Malthusia notion that economic growth inevitab entails environmental damage. Instea they have argued that the increased p lution associated with growth in ma poor countries is followed by improve environmental conditions once nation income reaches a critical level.

In a new study to determine whe that point may lie, Gene M. Grossm and Alan B. Krueger of Princeton Un versity analyze data on 14 air and wat pollutants from a wide range of cou tries at varying income levels. Wh each pollutant peaks at a different i come level, in general the study fin that environmental quality starts to i prove as a nation's per capita gross d mestic product approaches $8,000 in 19 dollars on a purchasing-power basis.

The findings, says Krueger, "refu claims that economic growth does u avoidable harm to the habitat." Indee several Latin American countries, su as Chile, Mexico, and Venezuela, as w as most fast-growing Pacific Rim natio (excluding China), have achieved inco levels that should start to foster an i proving environment. The bad new adds Krueger, is that about 70% of n tions haven't yet reached that point.

QUARTERLY GROWTH: DOWN TODAY, UP TOMORROW?

Economy watchers may get a surpr when first-quarter gross domes product is revised in a few weeks. Ec omist Paul McCulley of UBS Securit Inc. says March data suggest the grow rate could be lowered appreciably.

Other things being equal, McCull estimates that March readings on c struction and factory and wholesale ventories point to a downward revisi in first-quarter growth from 2.6% to u der 2%. Such a revision might calm in tion worries for a while, but the irony that lower inventories and construct in the first quarter argue for a strong rebound in the second.

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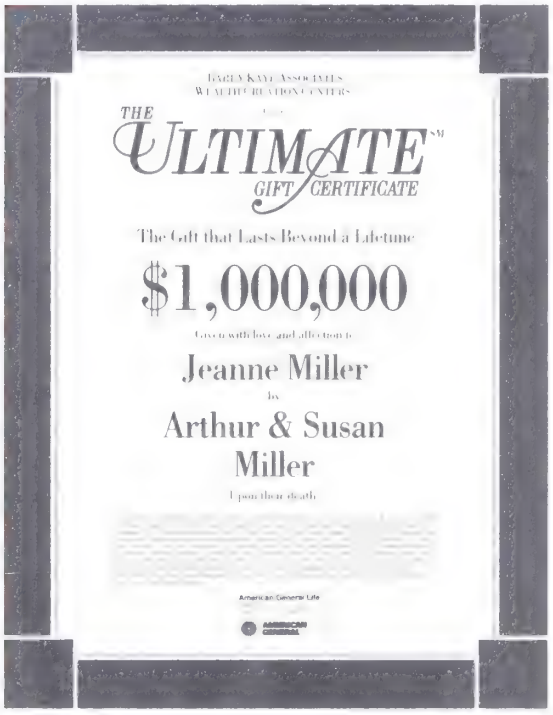

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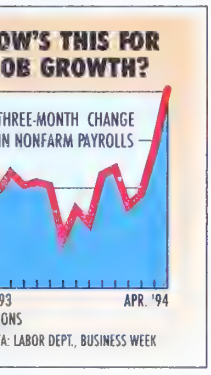
3, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

RING IS HOT. ILL THE FED CLAMP DOWN HARD?

he Federal Reserve appears to be only days away from its fourth tightening of monetary policy in as many months. And after back-to-back robust job rts, the shell-shocked financial markets now have a question to sweat through: Will the Fed need to interest rates more than expected in order to cool off economy?

e markets have generally interpreted the Fed's inten- to shift policy from accommodative to neutral as a in the overnight federal funds rate from 3% to the -4¼% range. But after seeing the Labor Dept.'s latest employment data, which belie the recently reported lown in first-quarter economic growth to 2.6%, the fi- al markets now worry that the economy's true th trend is upwards of 4% and that neutral policy not be tight enough.



Wall Street knows that the job market has been this expansion's steadiest beacon. And in April, companies beefed up their payrolls by a surprisingly large 267,000 workers, a gain that would have been at least 337,000 if not for 70,000 striking Teamsters, who are now back at work. The March surge, expected to be revised down, was instead put even higher, at 00, and the February gain was revised sharply up- s, to 278,000. That's more than a million new jobs, astest three-month growth in five years (chart).

if confirming the bond market's worst fears of rap- owth and rising inflation, the April job data touched e largest one-day bond sell-off since the Iraqi invasion uwait in August, 1990. By May 9, the yield on the nmark 30-year Treasury bond had soared to 7.65%, ighest since December, 1992.

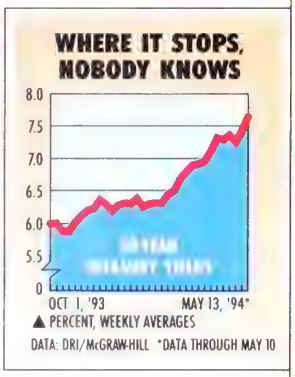
THERE IGHTING THE ?

The bond market appears to be begging for more aggressive action from the Fed. Indeed, the market's reaction to the Fed's rate hikes is far removed from past expe- e. On average, over three-month periods from 1977 to resent, a one percentage-point change in the federal- rate has led to only an 0.21 point change in the 30- bond yield.

wever, from early February to early May, the feder- ds rate rose 0.75 percentage points, while the bond yield surged 1.3 points (chart). Certainly, markets are now more volatile, but even if this historical relationship is off by a factor of three, yields should still be less than 7%, unless the bond market expects significantly more tightening.

The bond market may have allies in Washington. As the Fed's May 17 policy meeting approaches, an internal debate appears to be brewing over just how aggressive policy should be. According to a May 10 report in the *Los Angeles Times*, anti-inflation hawks at the Fed believe rate hikes are warranted as long as the jobless rate is below 6.5% and economic growth is greater than 2.5%.

The hawks also think that the federal-funds rate may have to rise to 5% or higher in the coming year. The jobless rate dipped to 6.4% in April, and economic growth has exceeded 2.5% in each of the past three quarters. Others, including Fed Chairman Alan Greenspan, believe in less rigid parameters.



Are the Fed hawks and the bond market right, or is this much ado about nothing? Despite the hefty job numbers, the latest flurry of concern about the inflation outlook still seems to be an overreaction.

First of all, the U. S. economy is not firing on all cylinders. Although its structural barriers to growth are clearly easing, the economy is still constrained by restrictive fiscal policy, defense cuts, corporate restructuring, import penetration, and debt burdens. Moreover, fierce foreign competition and faster productivity growth are curbing price pressures.

WAGE INFLATION HAS NO FUEL

In particular, productivity gains appear to be lasting, not fleeting as they usually are in a recovery. That means the economy can grow faster than 2.5%, and the jobless rate can go below 6.5% without generating price pressures. Measured as output per hour worked, nonfarm productivity growth slowed to an annual rate of 0.5% in the first quarter, but that followed a 6.4% surge in the fourth quarter of 1993.

Looking at the trend, productivity is up 2.6% from a year ago, a stellar performance for the third year of an expansion. And during the first three years of the upturn, corporate efficiency has risen at a 2.5% annual rate. That

ERIC HOFFMANN/BW

pace is much faster than during the expansions following the 1973-74 and 1981-82 recessions, even though those recoveries were far stronger.

The resulting benefit for inflation is the modest pace of unit labor costs. These unit costs surged at a 5% pace last quarter. That was clearly overstated, though, because the 5.6% advance in hourly compensation was far out of line with the earlier-reported rise in Labor's own employment cost index. Unit labor costs are up a mere 0.8% from a year ago, the slowest annual pace in 10 years, suggesting that wage-push inflation simply has no fuel.

The impact of productivity gains on unit labor costs in manufacturing is especially striking. Yearly growth in factory efficiency stood at a stunning 6.6% last quarter, while unit labor costs were down 1.7% (chart).

THE PACE OF JOB GROWTH IS UNEVEN

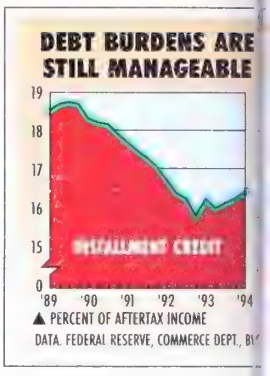
Market phobias aside, what does the latest labor report say about the economy? There's no denying that the jobs and hours-worked data were robust, but wage growth remains modest. With productivity gains, bigger payrolls don't automatically mean surging labor costs.

One reason for tame wage pressures is that the demand for labor has been very uneven. The percent of companies adding jobs has averaged just 58% so far this year. In other expansions, the rate has hit 70%.

The biggest winners so far this year have been skilled workers. The unemployment rates for skilled employees—from managers to repairmen—are falling much faster than the rates for lesser-skilled workers. And since skilled labor is where productivity gains tend to be greater, any pay increases caused by tighter labor markets are being offset by more efficiency.

In April, the bulk of the jobs created were servic slots that tend to be low-paid or part-time. Of the 184,0 new private-service jobs, 76% were in restaurants, temp rary help, and health care. But because there is sti some slack in the labor markets, wage growth remair low. Hourly nonfarm wages rose 3¢, to $11.06. Over th past year, wages are up 2.7%, about the same moderat pace as in the 12 months before that.

In addition, many of the new service jobs usually do not carry benefits, thus reducing labor costs. Companies have also used longer hours to avoid hiring new workers, thereby cutting down on benefits. The factory workweek stayed at its record high of 42.2 hours in April. The overall nonfarm workweek was also unchanged at a lengthy 34.7 hours last month.



More people working does mean more cash for cons mers to spend. The huge job gains in April, along with 0.3% rise in weekly pay, to $383.78, suggest another goo increase in wages and salaries. And the uptrend in incor will lift consumer spending at a moderate pace this yea

Better cash flow is also making it easier for cons mers to borrow. Installment credit jumped $7.4 billion March. But because income is rising just as fast, debt ou standing stood at 16.4% of disposable earnings in the fir quarter, way below its peak rate of 18.7% in '89 (chart Credit growth may slow soon, especially since the spen ing boom in consumer durables is starting to taper off.

The bond market, though, has latched onto the idea th more jobs will mean a wage-driven flare-up in inflatio But what the markets seem to be forgetting is that er ployees are producing more with every hour worke And the impressive gains in productivity are why growt is not the enemy.

THE WEEK AHEAD

INDUSTRIAL PRODUCTION

Monday, May 16, 8:30 a.m.

Output at the nation's factories, mines, and utilities probably increased by 0.3% in April. That's the median forecast of economists surveyed by MMS International, a division of McGraw-Hill Inc. Output has increased for 10 consecutive months, including a strong 0.5% advance in March. The April gain is suggested by the rise in factory payrolls, along with the record length of the manufacturing workweek. Motor-vehicle production, however, probably declined in April after growing at a 58.6% annual rate in the first quarter. The expected rise in total output indicates that industrial-operating rates edged up to 83.7% last month from 83.6% in March.

HOUSING STARTS

Tuesday, May 17, 8:30 a.m.

Housing starts likely slipped to an annual rate of 1.45 million in April from 1.47 million in March. However, a rise in construction payrolls suggests starts may have been stronger last month.

TRADE BALANCE

Thursday, May 19, 8:30 a.m.

The trade deficit for goods and services probably narrowed to $8.3 billion in March, from $9.7 billion in February, say the MMS economists. For goods alone, an expected rise in exports and a drop in imports mean a merchandi trade deficit of $11 billion in March, fro $13.9 billion in February.

FEDERAL DEFICIT

Friday, May 20

The federal government will likely r port a surplus of $20 billion for Apr the month when the bulk of all U. personal-income taxes are paid. The go ernment had a surplus of $8.1 billion April, 1993, but a tax-rate hike wealthier families in 1993 lifted th April's receipts. On May 10, Budget D rector Leon Panetta said the deficit f fiscal 1994, which ends in Septembe will total $225 billion, compared wi $235 billion projected in February.

(Wick Simmons, CEO Prudential Securities)

1

It's my job to set the tone for this company.

2

That starts with laying it on the line inside the company and out. We call that straight talk.

3

Straight talk means our investors hear the upside and downside of every opportunity.

4

It also means facing up to hard issues--admitting mistakes and fixing them.

5

Straight talk means if we fall short, we'll hear about it. That's good. It makes us do better.

6

Straight talk is more than words at the end of an ad. It's something we have to live by.

Prudential Securities

Prudential Securities today. It starts with straight talk.

To speak to a broker call 800-654-5454.

MAY 23, 1994

BORDERLESS MANAGEMENT

COMPANIES STRIVE TO BECOME TRULY STATELESS

From Henry Ford's earliest days selling the Model A Runabout, Ford Motor Co. was an international enterprise. Five years after its founding in 1903, it set up its first overseas sales branch, in France. By 1911, it was making cars in Britain. But more than 80 years and dozens of overseas operations later, Ford is still trying to figure out what it means to be a global company.

Ford, which announced a massive reorganization in April, isn't alone. On May 6, IBM said that it will reshuffle its worldwide sales, manufacturing, and engineering operations to better take advantage of global markets—and break down internal barriers. Then, just three days later, drug giant Bristol-Myers Squibb Co. announced a remaking of its consumer businesses in an effort to expand more aggressively abroad.

The moves make one thing clear: With world markets rapidly merging, companies that have been slow to globalize their management structures now have to scramble to play catch-up. IBM, for instance, studied Swiss-Swedish power-equipment giant Asea Brown Boveri Ltd., which reorganized in 1988, before changing its marketing and sales structure. And to come up with a model for its new global organization, Ford boned up on the operations of such rivals as Volkswagen and Toyota, as well as trendsetters such as General Electric, Hewlett-Packard, and Xerox.

This latest round of reorganizations comes from companies that have streamlined domestic operations and now are looking for efficiencies abroad. The result: dramatic changes in the way these U.S. giants work. Their aim: to break down national barriers inside the companies. IBM, for instance, is organizing its marketing and sales staffs into 14 industry groups, such as banking and retail, rather than by country.

The shakeup at Ford is even more dramatic: It is merging its large and culturally distinct European and North American auto operations and plans to later fold in Latin America and the Asia-Pacific region. Why bother? Chairman Alexander J. Trotman sees Ford as being in "an all-out race" to make more efficient use of its engineering and product development money against rapidly globalizing rivals.

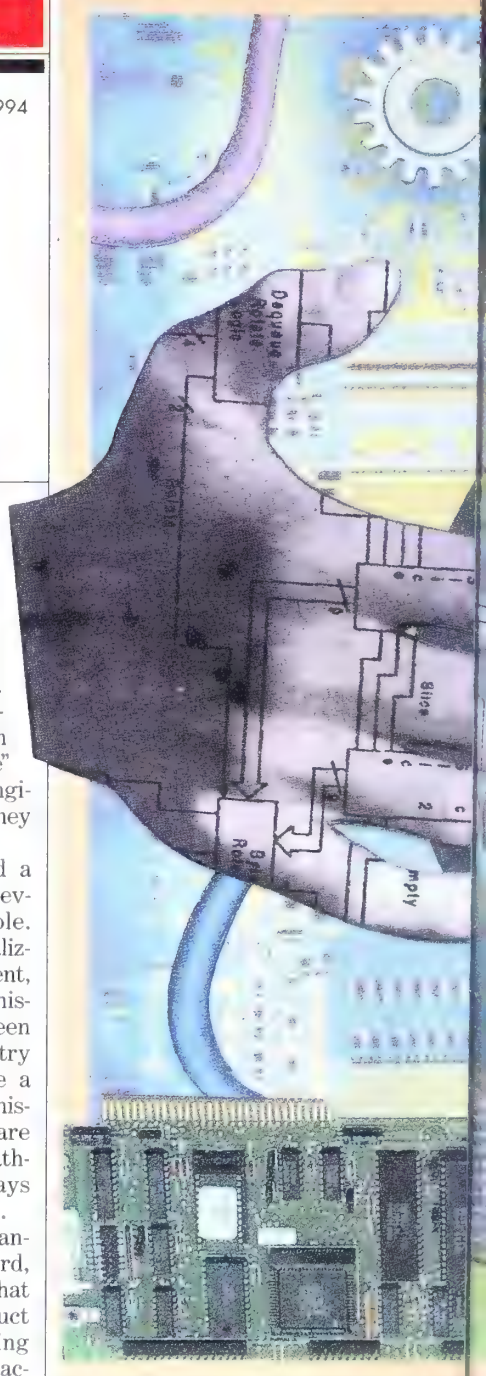
The downside of moving toward a global organization, however, can be considerable. When a company centralizes all product development, as Ford plans to do, a mistake that could have been confined to a single country or region could become a global disaster. "If you misjudge the market, you are wrong in 15 countries rather than only in one," says one European executive.

The days of a corporation cloning itself abroad are over. As global markets merge, those companies slow to reorganize are now scrambling to catch up

Yet the potential advantages are tantalizing. Ford, for example, estimates that by globalizing its product development, purchasing and supply, and other activities, it could save up to $3 billion a year. Much of these savings would come by pooling resources and eliminating numerous turf wars that have come from earlier forays abroad. Years ago, companies with international ambitions simply cloned themselves offshore, creating miniversions of the parent company in each country.

MIXED FORMATS. That model is becoming obsolete. McDonald's Corp. still customizes its menus by region, and PepsiCo Inc.'s Frito Lay Div. has a new Dorito chip for the British market that differs in both taste and texture from the American version. But more often, playing to local taste is no longer necessa
One example: Italians once preferr
front-loading washers, while the Fren
insisted on top-loading models. Whi
pool Corp., which acquired the appliar
division of Netherlands-based Philip
has made its name in Europe partly
breaking down such traditions with m
standardized models.

Globalization isn't taking any o
form. Indeed, most companies ha
adopted mixed organizational forma
Consider Unilever PLC, the consum
products giant. It uses a classic regio
structure with local managers in th



CUTTING TO THE GLOBAL CHASE

With world markets merging like never before, Corporate America is redoubling efforts to globalize operations. Here are three of the latest strategies:

To save up to $3 billion a year, Ford is merging its manufacturing, sales, and product development operations in North America and Europe—and eventually in Latin America and Asia. And in a move toward a more horizontal organization, the company is setting up five program centers with worldwide responsibility to develop new cars and trucks.

Big Blue is reorganizing its marketing and sales operations into 14 worldwide industry groups, such as banking, retail, and insurance. In moving away from an organization based on geography, IBM hopes to eliminate turf wars and make itself more responsive to customers.

Bristol-Meyers Squibb is revamping its consumer business by installing a new chief responsible for its worldwide consumer medicines business such as Bufferin and Excedrin. The $11.4 billion drug company also has formed a new unit with worldwide responsibility for its Clairol and other hair-care products.

s of the world: Africa/Middle East, n America, and East Asia/Pacific. in Europe and North America, re consumer preferences are more ar, the structure is different. The dent of Lever Brothers Co. in New , for example, reports to the Unilev- orldwide detergents-product coor- or in London.

ny Corp. organizes its global opera- into four zones: Japan, America, pe, and the rest of the world. But headquarters also boasts world- product groups that exercise broad agement oversight of their business- es. And at IBM, the latest reorganization still stops short of axing geographic chieftains, though frontline client reps will now report to industry-specific groups with broader powers.

"MUG'S GAME." Few executives have embraced global strategies more wholeheartedly than Percy Barnevik, ABB's chief executive. Barnevik's 1988 overhaul of ABB has forced country managers and product executives to set aside turf battles to tackle problems and woo customers. For such an effort to succeed, contends Barnevik, "the CEO has to lead the whole process. He has to be convinced, and he has to be convincing."

Simply redrawing lines on an organization chart doesn't make a company global. "Changing the boxes without changing the way you manage the boxes is kind of a mug's game," says Dick Ogren, who headed up the Ford study team that led to the recent changes. "It's not going to give you the results you're looking for."

CEO Trotman knows that. Under the new organization, product development will be coordinated by five program centers, four of them stateside. Avoiding Detroit myopia will be a challenge. "I

worry that Ford is not going to get enough international input," says one former Ford executive. To counteract that, Trotman assigned all small-car development to be handled by Ford's European engineers. U. S. teams are charged with designing larger cars, minivans, sport utilities, and pickup trucks—markets where American vehicles often set the standard. Each center also will boast worldwide representatives from all of the company's functions, from sales to finance and manufacturing.

Yet success is by no means assured. Barriers to change are everywhere. Ford, for instance, lacks compatible computer systems between North American and European operations, making cooperation and communication across borders more difficult than need be. But the auto maker, IBM, and others figure they have little choice but to attack such problems. To fail at these new globalization efforts would be like Henry Ford never having gone beyond the Runabout.

By John A. Byrne in New York and Kathleen Kerwin in Detroit, with Amy Cortese in New York and Paula Dwyer in London

LABOR

THE STEELWORKERS VS. THE 'SMILING BARRACUDA'

Facing a vote, AK Steel's Tom Graham is dead set on keeping the union out

Don't get Thomas Graham started on labor/management committees. He hates them. The chairman of AK Steel Corp. recalls endless meetings from his days at LTV Corp. in the '70s, when debates raged about where to hang shovels in the mills. Graham has been battling unions ever since. Not surprisingly, he passed when other Big Steel companies signed cooperative pacts last year with the United Steelworkers, guaranteeing jobs and granting board seats to union representatives.

Now, Graham and labor are about to face off again. On May 26, 3,348 workers at AK's Middletown (Ohio) mill will vote on replacing AK's independent union with the USW. Both sides are blanketing billboards and telephone poles in the small town, warning of disaster if the other side wins.

PROVING GROUND. In Graham, the union faces a formidable opponent. The dour 67-year-old former president of USX Corp.'s U. S. Steel unit is known among workers as the "Smiling Barracuda" because of his penchant for slashing costs. The USW has targeted Graham ever since he slashed U. S. Steel's workforce by 73% from 1983 to 1990. He has used similar tactics to cut costs at AK, the No. 6 integrated steelmaker, formerly known as Armco Steel Co.

The Middletown vote sets up a marquee matchup between Graham and the feisty new president of the Steelworkers, 65-year-old George Becker, who took over in March. Beating the Barracuda would cement Becker's hold on the integrated steel industry and give his union a much-needed public-relations victory. That's important for USW organizing campaigns in outside industries, from airlines to hospitals.

Graham remains one of the few holdouts against the new line of labor-management harmony spreading through steel and other unionized industries (page 70). To him, cooperation spells slower decisions and less control, which weakens AK's competitive stance against foreign companies and nonunion minimills. And the docile union that now represents Middletown workers has held only one five-day strike in the company's 95-year history, allowing Graham to reassure customers that strikes won't disrupt supplies.

The USW challenge comes just as Graham's old-style management seems to be paying off. In his two years in Middletown, AK cut its labor hours per ton by 33% and chalked up the integrated industry's highest operating profits per ton. In April, he took the company public, selling stock in Armco Steel—a joint venture between Armco Inc. and Japan's Kawasaki Steel Corp. After issuing $458 million of new equity, Graham emerged with a cleaner balance sheet and the new AK Steel name. "They've got a great start back to profitability," says Thomas M. Van Leeuwen, an analyst at CS First Boston Corp.

WARNINGS. True enough, assuming there's labor peace. In daily newspaper ads, the company reminds workers of an ongoing USW strike at Allegheny Ludlum Corp. Company mailings to workers' homes calculate that the average AK employee would have lost more than $5,000 in a similar strike at Middletown.

Meanwhile, the USW warns that AK workers will face relentless cycles of layoffs as Graham trims costs. "AK steel workers deserve the same protection that the rest of the steel industry has," says Becker. Plenty of workers seem to agree. "If he'd spend as much time bargaining with us instead of working on keeping the Steelworkers out, then we wouldn't need [the USW]," says Tom Sorrell, who has been a repairman at the Middletown works for 22 years.

Graham has promised to stay aboard until he's 70. But unless he can pull off a last-minute surprise victory, he's likely to face three long years of those labor-management meetings he hates so much.

By Keith L. Alexander in Middletown and Stephen Baker in Pittsburgh

TOM GRAHAM, LABOR SCOURGE

1983 Graham becomes president of U.S. Steel and eventually slashes the workforce by 73%. Steelworkers dub him the Smiling Barracuda.

1986 Graham faces down U.S. Steel's unions in a painful six-month strike.

1992 At Armco Steel (now AK Steel) he cuts the workforce by 25%, partly by contracting out work–which reduces union influence.

1994 At AK, Graham resists adding union representatives to his board and bringing the union in on management decisions.

GRAHAM: HE LEADS IN OPERATING PROFITS PER TON

W FROM NISSAN: VERSE STICKER SHOCK

t keep its momentum with the cheaper '95 Maxima?

wasn't the blaze of flashing lights, e dense artificial smoke, or the her hoopla that got the crowd go- the $5 million extravaganza that n Motor Corp. mounted on May 10 troduce its spanking new Nissan ma to its 1,093 dealers. Indeed, the stopper wasn't so much the model as its price: the made-in-Japan ma is hitting U. S. showrooms in Iay with a base sticker of under 00—nearly $2,500 less than the 1994 on it replaces.

ssan is on a roll, and the new Max- s designed to keep it going. From sales of 830,767 vehicles in 1985, n began a sickening slide through 80s that didn't bottom out until Then, 18 months ago, it launched 14,000 Altima, the auto maker's competitive entry in the lucrative et for family sedans such as the Taurus, Honda Accord, and Toyota y. With an added boost from a re- tated U. S. car market, Nissan's have climbed every month since. as taken a long time, but Nissan urned itself around," says Jesse er, an analyst at Autofacts Inc. "It lot of good, fresh products."

w Nissan is trying to repeat the ss of the Altima with its venerable ma. It used all sorts of tricks to its flagship sedan in under 20 grand—and it's making sure the car-buying public knows all about the new model. Nissan has booked its first ads for the National Basketball Assn. playoffs on May 14 and 15. The following day, TV viewers will see virtually nonstop teasers for the car on CBS—an event the advertising industry has already dubbed Maxima Monday.

Making the new Maxima a hot seller is crucial to Nissan's well-being. First introduced in 1980, the model has never had a bad year. "The Maxima kept us alive from 1989 to 1992," says Nissan Vice-President Earl J. Hesterberg. "It gave us an identity, it gave us profits, it gave our dealers profits." But the Maxima's base price has ticked up with each surge of the yen, from $16,900 in 1989 to $22,429 this year. And competition has heated up since 1992, when Toyota Motor Corp. debuted a revamped Camry with a V-6 engine and Chrysler came out with its Eagle Vision and Dodge Intrepid.

DUMPING DILEMMA. How did Nissan get the price of the Maxima down so low with the yen surging? Partly it's smoke and mirrors. Nissan turned some heretofore standard features, such as a security system, alloy wheels, and a $1,000 automatic transmission, into options. But Nissan's engineers in Japan also came up with a new cast-aluminum, 190-horsepower V-6 engine that cut the parts count by 10% and weight by a quarter while increasing performance and fuel economy. And they replaced a complicated independent rear suspension with a lighter, cheaper one that also paid off in more rear-seat legroom and usable trunk space.

The car, moreover, benefited from cost-cutting at Nissan's beleaguered Japanese headquarters. Plagued by a slump in Europe and a 10% sales falloff so far this year in Japan, Nissan is slashing costs by reducing the number of models, sharing more components in different cars, and lengthening product cycles. Coupe and wagon versions of the Maxima, for example, have been canceled. And Nissan is getting the most out of its development spending. Differently styled versions of the car will be introduced within a year in Japan and by Nissan's Infiniti brand in the U. S.

The question now is whether Detroit will respond to the Maxima's aggressive pricing with renewed charges of Japanese dumping. The higher yen has opened up a price gap that has allowed Motown to inch up prices on models that compete with the Maxima. Last fall, for example, Chrysler jacked up the base price of the Eagle Vision TSI by 8.4%, to $23,212, although Ford held the line on its $24,815 SHO Taurus. Now, analysts predict that other Japanese companies may follow Nissan's pricing lead—putting a lid on Detroit's ability to hike prices on some key models. "The reduced price structure on the new Maxima is not an anomaly," says Christopher W. Cedergren, senior vice-president at market researcher Auto-Pacific Inc.

Japanese carmakers, meanwhile, are scrambling to cut costs even further. Indeed, Nissan is already planning another shindig for its dealers, this one in New Orleans in January, to debut a redesigned version of its entry-level Sentra model. It will announce that the next-generation Sentra, now built in the U. S. and Japan, will come from plants in the U. S. and Mexico. With the peso starting to replace the yen in its equation, Nissan will be more formidable than ever.

By Larry Armstrong in San Francisco

TRADE

CLINTON'S 'BUY AMERICAN' PITCH KEEPS PAYING OFF

The Saudi-AT&T deal is just the latest export coup for the Administration

Chalk up another big one for the Salesman-in-Chief. On May 9, Saudi Arabia awarded AT&T a $4 billion contract to modernize the country's phone system. It was the largest telecommunications contract ever given an American company outside the U. S. It was also the result of an intense 16 months of lobbying by the Clinton Administration to win Saudi business.

DESERT DOLLARS: THE U.S. LOBBIED THE SAUDIS FOR 16 MONTHS

An anomaly? Hardly. The Saudis' decision to turn to the U. S. for a state-of-the-art system, complete with fiber-optic lines and wireless phones, is just the latest payoff from an aggressive Administration drive to promote the sale of U. S. goods and services around the world (table). And the only people with bigger smiles than the Clintonites are U. S. chief executives. "This is a truly serious effort," says Robert B. Shapiro, president of Monsanto Co. "The President has recognized that, in the post-cold-war era, getting global contracts for U. S. business is a matter of national security."

Clinton's goal: to catch up with th governments of Japan and European na tions, which have long been more ener getic—and successful—in pushing thei wares abroad. From now on, says Com merce Secretary Ronald H. Brown: "Th most important jobs-creation prograr this Administration may have is its ex port-promotion program."

More deals are in the works, too Transportation Secretary Federico P Peña recently traveled to the Unite Arab Emirates to sell navigation gea air-traffic-control systems, and airpor management services from Raytheon Co Westinghouse Electric Corp., and othe U. S. companies. And Brown will lead delegation of five CEOs—including AT&T Robert E. Allen and GTE Corp.'s Charle R. Lee—to Brazil, Chile, and Argentir at the end of May on a Presidenti trade and investment mission.

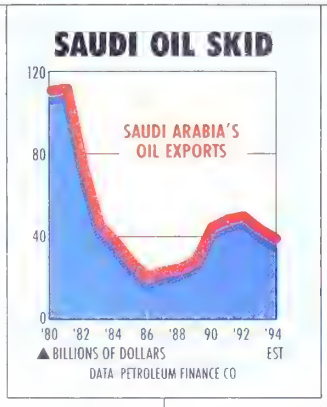
TEAMWORK. Administration marketer also have set their sights on fast-grov ing Indonesia, despite unhappiness wit its human-rights record. The State Dep is helping Houston-based Enron pursu bids to construct private power plant as well as aiding General Electric ar Westinghouse, which are competing wi foreign companies on $12 billion worth nuclear power plants.

Clinton personally lobbied Indonesia President Suharto to help U. S. comp nies reverse their declining market sha

THE SAUDIS ARE BUYING—BUT WITH WHOSE MONEY?

Bill Clinton proved he can sell phones to the Saudis. Next, he may have to demonstrate that he can make them pay the bill.

It is the U. S. taxpayer who will likely be financing most of the Saudi's $4 billion contract with AT&T, through the U. S. government's Export-Import Bank. And a $6 billion, commercial jet order won by Boeing Co. and McDonnell Douglas Corp. from the Saudis in February will be financed the same way.



DEEP DEBT. Collecting on the loans may prove dicey, because the world's No. 1 oil exporter is running out of cash. Although Saudi Arabia pumps 8 million barrels a day—and supplies almost 20% of U. S. oil imports—oil prices are just barely bumping off five-year lows.

That's catastrophic for the Saudi economy, which is 85% dependent on oil revenues. Last year, the government earned only about $40 billion from its oil exports (chart), less than half the levels of the early 1980s and fully $11 billion less than needed for outlays. Saudi Arabia weathered an earlier collapse of oil prices, from 1985 to 1987, by drawing down huge accumulated cash reserves. Now, after 14 years of deficit spending, those reserves are all but gone, and Riyadh has racked up close to $80 billion in domestic debt.

While AT&T executives pop the champagne corks, it's now doom and gloom in the Saudi business world. Since January, when King Fahd announced across-the-board spending cuts of 19%, the Saudi government has virtually stopped paying its bills. That's sending the local economy—the Middle East's largest—into a tailspin. The Saudi stock excha down 30% since February, while th booming commercial-property ma Jeddah and Riyadh is continuing t A possible move, recently announ King Fahd, to raise cash by stakes the government owns in companies could put further pres the stock market. The govern portfolio of listed shares is wort than $9 billion.

LOCAL LENDERS. Bahrain banke some of the kingdom's biggest are having trouble paying bills. the biggest—Jeddah-based Saudi B Group, General Electric Co.'s larg di affiliate—is owed up to $1 bi payments by the Saudi governm cording to local banking sources.

And for the first time ever, is finding it difficult to raise fres To pay a $1.85 billion installme the U. S. in late April for such r hardware purchases as the Mc Douglas F-15s, Riyadh first appr big New York-based banks for

country when the
met at the Pacific
trade summit in
le last fall, aides
The lobbying will in-
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m there on, it was a team effort.
n pleaded AT&T's case with Saudi
als on two trips last year, and
topher talked up the deal during
ecent Mideast Peace Agreement
. As with the Saudis' earlier agree-
to replace their aging airliners with $6 billion of aircraft from Boeing Co. and McDonnell Douglas, the U. S. Export-Import Bank has offered preliminary commitments to finance the entire AT&T deal (box). "We're on planes, we're picking up the phone and calling folks," Brown says.

Persistence, of course, doesn't always bring home the bacon. Despite heavy U. S. lobbying, the Indian government recently chose Europe's Airbus Industrie over Boeing and McDonnell Douglas for a $1 billion airliner deal.

JOBS PROGRAM. In the past, moreover, it was seen as unbecoming for a President to hawk U. S. wares so blatantly. But for a President whose handling of foreign policy has been widely criticized (page 41), Clinton's export-promotion effort in the new global economy has proved to be the one bright spot. "It may appear unseemly, but for U. S. firms to continue to lose business to Japanese and German competitors while the President stands idly by would be criminal," says R. K. Morris, director for international trade at the National Association of Manufacturers. With thousands of jobs at stake, Clinton has decided that a strong U. S. export machine is crucial to national security—and he will do whatever it takes to keep the goods moving.

By Douglas Harbrecht in Washington

DOLLAR DIPLOMACY

The Clintonites' export-promotion push is starting to rack up big deals for some U.S. multinationals.

MAY 9, 1994 After heavy lobbying from the White House and Cabinet officials, Saudi Arabia awards AT&T a $4 billion contract to modernize the country's telecommunications system.

FEB. 16, 1994 A beaming President Clinton and Prince Bandar, Saudi Arabia's ambassador to Washington, announce that the Saudis will buy $6 billion worth of commercial aircraft from Boeing and McDonnell Douglas.

FEB. 14, 1994 In a discussion of political and military issues, Clinton urges visiting President Nursultan Nazarbayev of Kazakhstan to allow Chevron to participate in a $20 billion deal to develop Kazakh oil fields. Chevron wins the business, though snags over financing have temporarily blocked progress.

FEB. 13, 1994 With State Dept. support, GE and a Southern California Edison unit sign a $2.5 billion agreement with Mitsui of Japan to build Indonesia's first big private power plant.

t didn't work, the Saudi gov-
leaned on local commercial
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ut that's like robbing Peter to
' says one leading banker in
Businesses here could have used
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olitical consensus through a lavish welfare system that includes cheap housing, free education and medical care, and almost free utilities. "There is still no sign at all that the King and the royal family are prepared to bite the bullet" and cut those entitlements, says one Western diplomat in Riyadh. Some Saudis even quietly liken Fahd to his half-brother, King Saud, who nearly bankrupted the kingdom before he was deposed and exiled in 1964 in a family coup.

WITH OIL REVENUES WAY DOWN, CASH RESERVES ARE TIGHT

PHOTOGRAPH BY J. LANGEVIN/SYGMA

Of course, Saudi rulers could buy time if the oil market picks up. Already, prices have perked up a bit from their winter lows. Thanks to stirrings of economic activity in Europe and Asia, the Paris-based International Energy Agency estimates that the world will need 400,000 extra barrels a day of oil from OPEC countries to satisfy increased demand this year. At the same time, the civil war raging in Saudi Arabia's southern neighbor, Yemen, is raising fears once again about political stability in the Middle East.

But even if oil prices do recover, it could be rather difficult for a debt-burdened Saudi economy to get back on its feet. And that's something the Clinton Administration, while focusing on the roughly 150,000 American jobs created by those AT&T, Boeing, and McDonnell Douglas megacontracts, might ponder.

By John Rossant in Rome, with Stanley Reed in New York

LOBBYISTS

A RANGE IN CALIFORNIA: THE NRA HAS SPENT MILLIONS TRYING TO MAINTAIN ITS CLOUT

IS THE NRA ALL HAT AND NO CATTLE?

The gun lobby boasts more members than ever—and a lot more red ink

By all rights, the gun-loving types at the National Rifle Association should be up to their bandoliers in both guns and butter. Membership has surged, spurred by fear of violent crime and anger over growing congressional support for gun control—most recently, the ban on certain semiautomatic weapons, which passed the House of Representatives by just two votes on May 5. Enrollment has jumped 40% over three years, topping 3.3 million.

The reality, though, is much gloomier. An embattled NRA has spent millions of dollars trying to maintain its influence at the ballot box and on Capitol Hill. The result: The group has been in the red since 1991—despite its booming enrollment. In the past three years, the NRA has exhausted nearly half of a $90 million reserve. In recent months, it has cut its staff by 7% and closed offices.

AGGRESSIVE DRIVE. The gun lobby's executives insist that its finances are solid. The reserves drain, says Treasurer Wilson Phillips, reflects "a huge cash investment in rapid growth... to make the NRA more relevant." The changes began in 1991, when Wayne R. LaPierre Jr. became chief executive officer. The NRA's top gun says he took over an association that "lacked direction." Membership had declined by 500,000 over two years. And rank and filers were complaining that the NRA, oriented toward rural hunters, didn't appeal to an increasingly suburban, crime-obsessed society.

The remedy, according to Phillips: "some fairly radical changes." The NRA cut subsidies for such traditional programs as the U. S. Olympic shooting team and law-enforcement instruction. It expanded anticrime efforts, women's programs, and its "Eddie Eagle" gun-safety program for schools. The changes elicited howls of protest from those who were affected. Admits Phillips: "There's a feeling that they are being left out in the cold."

Under LaPierre, the NRA launched an aggressive drive to gain new members. Dissidents complained that the recruitment was not cost-effective, pointing to a $6 million startup cost, which depleted reserves. "They've blown through the surplus, no question about that," says Joseph A. Artabane, an attorney representing the Olympic team, which took legal action to remove the NRA as its governing body. But Phillips says that because of the lower cost of getting new members to re new, the effort already "has develope into a positive-cash-flow thing."

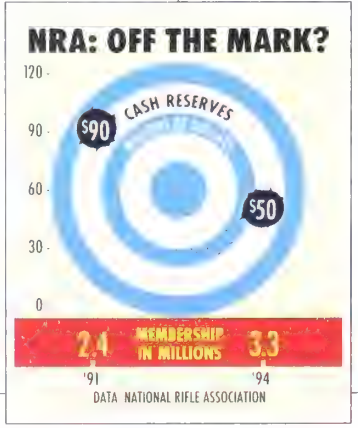
The membership drive isn't the onl drain on the NRA's bottom line. It re cently took a $6 million write-off for faulty computer system inherited fror the old regime. And the NRA tapped it cash reserves again to buy its new Fai fax (Va.) headquarters. The building purchased in 1993 at a foreclosure sal during the depth of Washington's rea estate blowout, cost $31 million—30% less than comparable Washington proj erties. Still, critics see the new hea quarters as an unfortunate symbo Gripes a former NRA staffer: "They'v got this Taj Mahal, but they're cuttin back services."

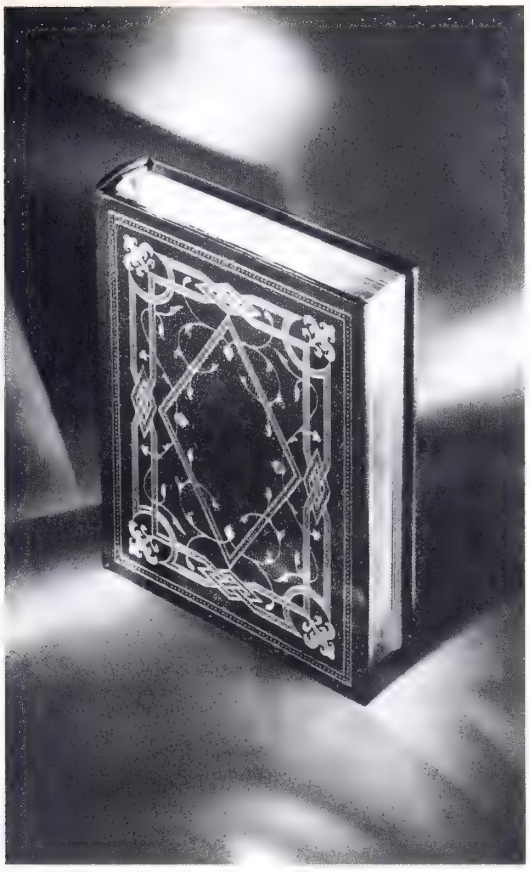
PLAYING HARDBALL. Another high-pr file expenditure was the $5 million th the NRA spent on two public-relatio campaigns: an attack on Time Warne Inc. for its sale of anticop rap music ar an advertising offensive against NE News and its former president, Micha G. Gartner, an outspoken gun-contr advocate.

Critics condemn the group's hardba tactics. As part of its unsuccessful bid kill curbs on assault weapons, the NF bought a full-page ad in *USA Today* l beling Representative Charles Schumer (D-N.Y.), the ban's author, "th criminal's best friend in Congress." Ar in an effort to oust California state Se ator David A. Roberti, a Democrat wh sponsored California's 1989 law outlawi many assault weapons, a memo by NF members declared: "Producing politic pain by bleeding our targets is wh brings us great pleasure." Rober emerged from an Apr. 12 recall vote u scathed and now is running for sta treasurer. "They don't intimidate pe ple any more," he chortles. "They're t ones who've been wounded."

NRA officials insist that despite t grousing—and, indeed, some talk of to pling LaPierre—most rank-and-file me bers are solidly behind the team headquarters. LaPierre says his efficie cy drive already is pa ing dividends. "Th year, the books will b ance," the executi pledges. All the san the NRA's spendi habits could be the spiration for a new s gan for the grou Praise the lard and pa the ammunition.

By Richard S. Dy ham in Washingt with Eric Schine in L Angeles





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A UNITED UNITED IS STILL A WAYS OFF

Gerald Greenwald has a giant selling job to make employee ownership fly

NOT YET OFF THE GROUND: GREENWALD STILL NEEDS INVESTORS' APPROVAL FOR THE DEAL—AND THE FLIGHT ATTENDANTS ARE NOT ON BOARD

When United Airlines Inc. chairman-in-waiting Gerald Greenwald toured the carrier's San Francisco maintenance base in mid-April, he walked the floor and talked with employees. At one stop, he slipped smoothly into Spanish to chat with a Mexican-American shop steward. And when another worker confronted him with "So what are you going to do for me?" Greenwald shot back: "I was just going to ask you the same question." Compared with the hoopla and canned applause at the mass meetings of outgoing UAL Chairman Stephen M. Wolf, Greenwald's down-to-earth approach was "very refreshing," says Dennis Hitchcock, a machinists' union official.

Lookin' good so far, Gerry. But Greenwald's people skills are about to be put to a supreme test as he tries to get United's proposed $5 billion employee buyout off the ground. With a shareholders' vote on the plan looming by late June, sizable hurdles remain.

INDUSTRY MODEL. Chief among them: Many rank-and-filers are angry about the pay cuts they will have to take in exchange for the 53% stake employees are getting—even though the pilots' and the machinists' unions proposed the deal. The airline's 17,000 flight attendants still haven't opted in. United shareholders are nervous about the buyout. Meanwhile, rival carriers such as Delta Air Lines Inc. are moving to match the cost cuts United will gain—without giving up lots of stock.

Even friends wonder if Greenwald can pull it off. "Somebody's crazy. It can't work," says Lee A. Iacocca, Greenwald's former boss at Chrysler Corp., where Greenwald was heir apparent until he left in 1990 to participate in an earlier United buyout effort. "What do you think will happen when it's a choice between employee benefits and capital investment?"

Indeed, if United works, it may provide a whole new model of corporate governance—one combining the teamwork approach of General Motors' Saturn Corp. with the majority employee ownership of Weirton Steel Corp. The Clinton Administration holds up the buyout as a new style of cooperative labor relations that it wants adopted more broadly. Likewise, former Federal Reserve Board Chairman Paul A. Volcker says he agreed to join United's new board because the buyout represents a bold experiment in what he calls "industrial democracy."

Gerry Greenwald seems an unlikely choice to head such a venture. A soft-spoken finance whiz, he has no airline experience and little record of dealing with contentious unions. Those who know him agree he's no born leader. Yet Greenwald's easygoing manner is a reason United's unions chose him: They want a consensus builder to forge fractured groups into a harmonious team.

LOW MORALE. Greenwald now is looking to hire a No. 2 with airline experience, negotiating to bring the flight attendants aboard, and forming worker task forces to evaluate operations. He says he'll wait for a president to make most strategy decisions. But he is pushing for a quick ramp-up of the low-cost "airline-within-an-airline" that United will create to compete with Southwest Airlines Co.

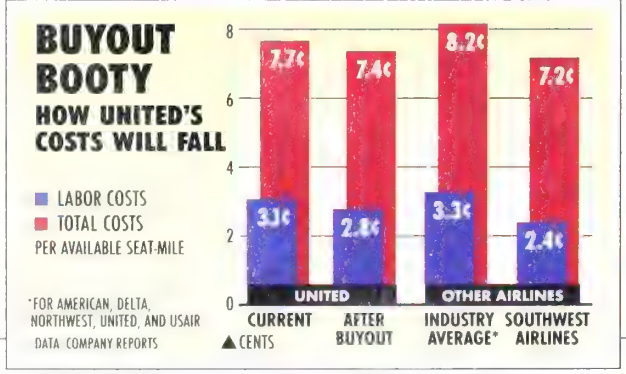
Meanwhile, Greenwald must hurry to form a plan for pulling together United's 76,000 employees. Dissident pilots and mechanics have hired lawyers to fight the buyout concessions. And 23% of machinists have signed cards seeking to secede from their union.

While none of this would stop the buyout, the effect on morale could be devastating. The company estimates that the wage-and-benefit cuts involved will slash United's unit costs by 4%, to 7.7¢ per mile for every available seat (chart). That would put United close to Southwest Airline's 7.2¢, but unhappy workers could undermine the gains.

So far, Greenwald hasn't made much headway with the naysayers. Part of this may be his own fault. While answering questions from a group of pilots in San Francisco last month, Greenwald fumbled and had to admit he didn't realize employees wouldn't be able to trade their stock until they retired. "He seems like a very nice man, but for $80,000 a month, you'd think you'd get a little more," gripes one veteran pilot.

Greenwald, however, says he has been preparing since college for the challenge. The son of a Russian immigrant wholesale grocer in St. Louis, Greenwald studied economics and labor on a scholarship at Princeton University. He worked in St. Louis one summer as an organizer for the garment workers' union. "If you had asked me then to name my top 10 heroes, half of them would have been labor leaders," he says. Greenwald may never join their ranks, but if he pulls off the United deal, it will be a heroic feat.

By Susan Chandler in Chicago



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CONSTRUCTION

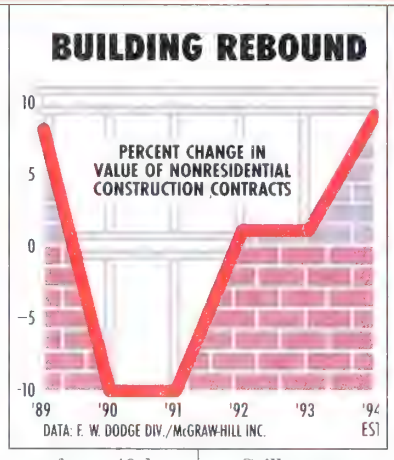
DUSTING OFF THE BLUEPRINTS

Renovations and retail building are fueling a revival in construction

Ah, for the 1980s, when investors forked over millions at the drop of a hat to build yet another office park or shopping mall. In 1989, the peak year of such crazed activity, developers committed $106 billion to new commercial construction. It has been sharply downhill since. But buried in the Labor Dept.'s April employment survey, released May 6, was evidence of recovery: Construction employment surged, as contractors took on 64,000 new workers—double that of a year ago.

Boom time again? Not by a long shot. But finally, three years after residential construction began improving, new casinos, retail stores, and renovations are producing a smart spurt in commercial building. The F.W. Dodge Div. of McGraw-Hill Inc. predicts a 9% rise, to $95.7 billion, in new commercial contracts this year (chart).

Office-building and manufacturing remain flat, still dampened by enormous oversupply. Rather, the hot sector is renovations and new construction for retail stores, which should rise 12% this year, to $14.6 billion. Richmond (Va.)-based electronics retailer Circuit City Stores Inc., for one, will build 60 new stores this year—up from 40 last year. New contracts with Circuit City and other retailers pushed builder Turner Corp.'s sales up 4%, to $734 million, in the quarter ended Mar. 31.



FRAGILE. Office projects, by comparison, are relatively rare. But real estate broker Cushman & Wakefield Inc. says nationwide vacancy rates fell to 18.4% in the first quarter this year, from 19.9% a year ago. That has some developers dusting off long-shelved plans for new construction. Perini Building Co. recently picked up a $7 million Las Vegas office project for developer Summa Corp.—Summa's first such project in five years. And office-furnishing suppliers say business is returning. Armstrong World Industries Inc.'s American Olean Tile Co. unit projects ceramic-tile sales for commercial jobs will grow by 7.5% to 8% this year. "Last year, it was dead flat," says President Robert J. Shannon Jr.

Still, most construction executives admit this nascent recovery is vulnerable. Manufacturing construction remains very weak, as "U.S. companies are putting capacity off shore," observes Thomas Zarges, president of Morrison Knudsen Corp.'s commercial-building group, who doesn't expect an upturn in new construction. And analysts say that office vacancy rates will have to decline to about 10% before banks consider financing new projects. Until then, keep the champagne under your hard hat.

By Gary McWilliams in Boston

MUTUAL FUNDS

FUND MANAGER, MANAGE THYSELF

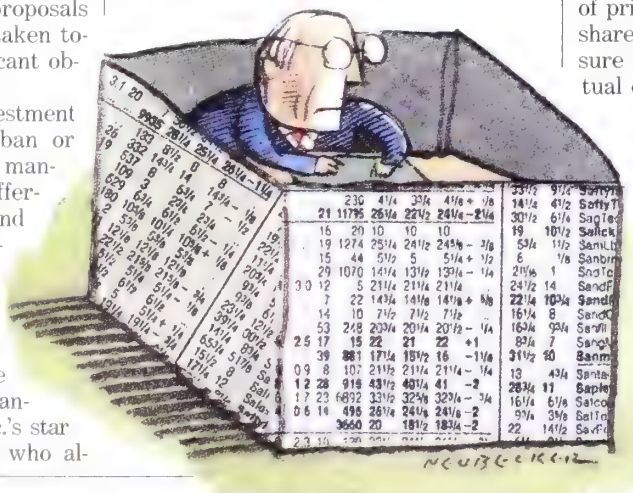
Surprise! The industry's proposed rules have real teeth

Self-regulation rarely yields such tough-minded results. On May 9, facing investor outrage and pressure from Washington, the mutual fund industry proposed sharp restrictions on personal trading by fund managers. Some of the broadly worded proposals leave room for questions. But taken together, they represent a significant obstacle to abuses.

Among the practices the Investment Company Institute wants to ban or severely restrict: letting fund managers invest in initial public offerings and private placements, and making quick profits on investments of less than 60 days. The rules, which won kudos from government officials and analysts, come just four months after the event that triggered the self-examination: the firing in January of Invesco Funds Group Inc.'s star fund manager, John Kaweske, who allegedly failed to report personal investments he made in private placements.

That sort of investing would be sharply curtailed by the ICI's proposals. Also targeted: such potential conflicts of interest as "front-running," when managers take personal positions in stocks and rely on their fund's clout to boost the shares. One of the new rules requires managers to wait seven days before and after their fund trades in a stock before they can buy it themselves.

Granted, the recommendations are not watertight. For one, it's not clear from the wording of the IPO rule whether portfolio managers are barred from investing in, say, state or municipal bond offerings—markets that lately have had problems with insider dealings. Another similarly vague proposal doesn't specify whether managers can receive restricted stock or warrants in companies as "compensation" for advice.



REAL TEST. Another question: Why does the seven-day rule apply only to portfolio managers? All other employees, including a portfolio manager's secretary, must delay their trades only until an order clears the trading desk. That potentially could allow fund employees to "ethically" piggyback on big positions that create buying or selling pressure.

But the industry has covered its bases. Its policy includes a statement of principal that firms should always put shareholder interests first as well as ensure that all personal trading avoids actual or potential conflicts of interest.

The real test of these rules will come next month, when the Securities & Exchange Commission reports to Congress on the personal trading practices of managers at 30 fund complexes. Assuming they survive the scrutiny, the ICI's member firms would do well to implement them quickly, before Congress forces them to adopt rules of its own making.

By Geoffrey Smith in Boston

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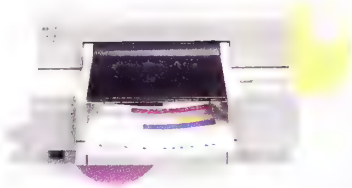

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SILICON VALLEY

MIRAGE AT MEDIA VISION

After earnings do a vanishing act, management is "being reviewed"

Media Vision Technology Inc., acclaimed just months ago as one of Silicon Valley's highest fliers, suddenly is under siege. On May 10, the company acknowledged it is being investigated for "possible securities issues" by the Securities & Exchange Commission and the FBI. Three board members have resigned, and fourth-quarter profits of $8.5 million will be revised to a loss. There's more to come, says one of two remaining outside directors: "The management of the company is being reviewed by the board," says G. Bradford Jones, a general partner with venture-capital firm Brentwood Associates.

All that is quite a comedown for a company whose sales of sound and multimedia kits for personal computers grew 250% in 1993, to $241 million. The problem? Media Vision appears to have pushed products too aggressively to retailers: Receivables on Dec. 31 reached $112 million, nearly double the preceding quarter, and inventory rose to $80 million from $43 million. The company says sales were hurt by industrywide price-cutting.

DEAF EARS. In addition, the *San Francisco Chronicle* reports that Media Vision executives falsified sales records and operated a phantom warehouse to hide returned inventory. Paul C. Jain, 48, the New Delhi-born chief executive, wouldn't comment. But one senior Media Vision executive says: "I've been telling anybody who would listen here since last August that the company was fiscally out of control." Now, the executive says, Media Vision has spent much of the $60 million on hand at yearend.

JAIN: LAYOFFS

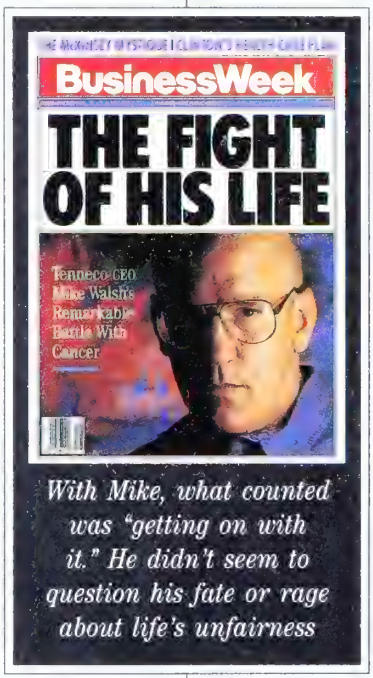
In the meantime, Media Vision's stock has crashed to about 3 from a high of 46.50 in January. And the Valley wonders whether Jain can keep his job. In December, he told BUSINESS WEEK he wanted his fast-growing company "to do something where people sit up and say, 'Wow.'" It sure did.

By Kathy Rebello and Robert D. Hof in San Francisco

Commentary/by Wendy Zellner

REQUIEM FOR A HEAVYWEIGHT

When I learned of Mike Walsh's death on May 6, I felt a strange mix of sorrow and betrayal. Sadness at the loss of a man I had come to know and like through hours of interviews about the kinds of things that touch the soul, not the balance sheet—family, brain cancer, and death. And betrayal, strangely, because Walsh had inadvertently deceived me. My reporter's skepticism had yielded to his powerful optimism; I had let myself believe, despite the odds, that Walsh, 51, could beat cancer. Somehow, the CEO of Tenneco Inc. made it seem possible that determination and "no-excuses" resolve could overcome all obstacles.



With Mike, what counted was "getting on with it." He didn't seem to question his fate or rage about life's unfairness

For most of Walsh's remarkable life, that was true enough. After graduating from Yale Law School in 1969, he quickly moved from public defender to CEO and turnaround artist at Union Pacific Railroad Co. and conglomerate Tenneco. With harsh cost-cutting and wide-ranging quality initiatives, Walsh boosted productivity and profits at both companies. He framed the battle as a war to prove America's industrial might, and reveled in making behemoth organizations more responsive to customers and shareholders.

NO SELF-PITY. Grit was always a Walsh hallmark. Shoulder injuries forced him to quit college football and his dream of playing professionally. But he regrouped, channeling his energies into academics and landing a spot from Stanford University in the first class of White House Fellows. Later, at Yale, he refused to yield to mononucleosis at the end of his first year, determined to finish exams.

Friends from Stanford talk about one incident that sums up Walsh's supreme confidence, even cockiness. At a football rally before the "big game" against the University of Southern California, students were booing the winless team and drowning out the coach. Suddenly, Walsh, a freshman football player with his arm in a cast, bolted from the crowd to the stage. He castigated the students for their behavior, and challenged the hecklers to take him on. The crowd erupted in cheers. And the next day, Walsh recalled last year, "the stands were one big sea of respectful enthusiasm." The game? "We lost," Walsh laughed heartily.

With Walsh, it was easy to forget the losses. In the face of cancer, he didn't seem to question his fate or rage about life's unfairness. "You either get on with it or you don't," he explained. "Not because it's such a courageous thing or so terribly meritorious, but practically speaking, if you don't what the hell do you do?" His attitude rubbed off on family, friends, and colleagues. Tenneco continued its transformation under Walsh's handpicked successor, Dana G. Mead. And Walsh's wife, Joan, focused on helping him through chemotherapy and radiation. There was no time for self-pity during the 16-month ordeal. "Why should we be protected?" Joan asked last summer. "We're no more special than anybody else."

That infectious determination was Mike Walsh's real power. He made those close to him believe that they, too, were capable of untold strength and courage. That's a message cancer can't take away.

Dallas Bureau Chief Zellner portrayed Walsh's battle with cancer in Sept. 20, 1993, Cover Story.

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In Business This Week

EDITED BY KEITH H. HAMMONDS

MORE MUCK IN THE SWAPS SWAMP

Another corporate swaps customer has taken a hit. Air Products & Chemicals, based in Allentown, Pa., said on May 11 it had reduced second-quarter earnings by $60 million, to $13 million, to reflect a decline in the value of five leveraged derivative contracts. Its banker: Bankers Trust, which also was involved in derivative deals in which Procter & Gamble, Mead and Gibson Greetings booked losses. "We understood the formula," says Gerald White, Air Products' CFO. "Our risk analysis did not pick up the effect of the leverage feature on the downside." Bankers Trust says it believes "derivative products are useful and will continue to be used." Beginning May 10, Congress held hearings to consider regulating derivatives.

GLAXO-McKESSON: A DEAL OR JUST TALK?

Drugmaker Glaxo is after McKesson's PCS pharmacy-benefits-management unit. But its game plan is unclear. In two days, McKesson stock soared 12%, to 80⅞ on May 10, on a report that Glaxo was negotiating to buy the division. It fell the next day on talk that the companies simply would sign a strategic agreement. Neither side would comment, but a deal wouldn't be much of a surprise: Drugmakers want benefits managers such as PCS to ensure that their brands are chosen among equivalent drugs. That's why Merck bought Medco, and why SmithKline is buying DPS.

SORT OF A VICTORY FOR DUPONT

Hours before a jury ruled in its favor in a Florida lawsuit over Benlate, DuPont settled with four growers who claimed crop damage from the fungicide. Rather than take a chance on the May 11 verdict after a five-month trial, DuPont agreed to pay the four and some 55 other plaintiffs unspecified amounts under $1 million each. But the jury, forced to rule because a fifth farmer held out, exonerated the company—a verdict DuPont attorney John Schmutz called "DuPont's sweetest victory" yet. DuPont still faces more than 200 Benlate lawsuits.

BAD NUMBERS SPOIL A PHONE DEAL

For Peoples Telephone, it was truly a wrong number. On May 10, the prospect of a first-quarter operating loss scuttled the Miami pay-telephone company's proposed acquisition by IDB Communications. IDB had offered $17.60 a share, or $330 million. But it balked when Peoples said that bad winter weather had turned the $1.5 million operating profit analysts had expected into a $400,000 loss. IDB, a satellite carrier primarily of international calls that wanted to build its U.S. business through Peoples, then reduced its offer to just $236 million—a price that Peoples rejected. Peoples' stock dropped 5⅝, to 7⅜ on the news of the deal's collapse.

CLOSING BELL

KEMPER CAVES

Quite a show of bravado from Kemper. Faced with GE Capital's unwanted takeover proposal, the financial conglomerate boldly offered shareholders a deal. Reject GE, it promised, and we'll have the stock up to 65 within a year—or else sell out to the highest bidder. But investors won't have to wait that long. Five days later, on May 8, GE rolled back in with a revised offer of $60 a share, up from $55. Now, Kemper has opened the bidding to all comers, inviting GE and other would-be suitors to review its books. No one else rushed to take the bait, though, and by May 10, Kemper's stock had settled just below GE's offer.

DATA: BRIDGE INFORMATION SYSTEMS INC

HEADLINER

A SOOTHING PRESENCE AT DELL?

To some, Michael Dell's May 9 decision to share CEO duties with Motorola veteran Morton Topfer seems the perfect corner-office marriage. A manufacturing whiz, Topfer helped Motorola's mobile-radio unit thrive. And Dell, the 29-year-old personal-computer wunderkind, draws praise for being that rare breed of entrepreneur who knows his limitations. Indeed, Topfer will join a spate of big-company executives hired in the past 18 months to help Dell control his company's growth; it lost $35.7 million last year, even as sales ballooned 30%, to $2.8 billion.

Still, things may not be so clear-cut when Topfer report for work on June 1. Insider doubt Dell is ready to giv up day-to-day control—despit urging from board membe that he focus on strategy. I stead, Dell had grante partial power to string of would-b operation chiefs, none whom has las ed long.

Now, it's To fer's turn. H says that he aware of Dell stormy past—but h nonetheless bought a hon near Dell Computer's Aust (Tex.) headquarters. "I tru believe Michael wants to c down on the turbulence," says. Maybe so. Dell could with some stability.

By Peter Burro

SPLIT DECISION IN AN AIDS SUIT

This had the makings of a major civil rights dispute. A Delta Air Lines reservation sales manager with AIDS claimed that the carrier had violated his civil rights by firing him in 1991. But on May 10, the San Mateo County Superior Court jury returned mixed verdict: a $275,0 award for the infliction emotional distress, but no cision on the key issue of d crimination. For now, Del has ducked the more than $ million in damages sought the former employee, Jose Sullivan. The jury agree though, that Delta had viol ed Sullivan's right to priva by listing him among oth San Francisco employees w AIDS, and by requiring him inform each of his co-worke personally of his illness.

ET CETERA . . .

- Nicotine addictive? A nev revealed 1963 tobacco stu shows producers knew it w
- Dillard Department Sto publicly joined the hunt bankrupt retailer Macy's.
- Apple Computer and IBM dered their multimedia v ture, Kaleida, to scale bac
- General Motors agreed contribute $10 billion to creaking U.S. pension pla

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EDITED BY OWEN ULLMANN

LINTON'S FOREIGN POLICY: DISASTER WAITING TO HAPPEN

the vast foreign affairs firmament, it seemed like just a olicy blip. But President Clinton's decision to ease immi- ration curbs on Haitian refugees—the latest in a long g of flip-flops—will create ripples far beyond the bbean. Coming amid a concerted drive to convince allies the White House has at last found a foreign policy com- , the reversal signals new trouble for Clinton.

hat's the last thing the President needs as he preps for a summit in Europe. With the Continent t by unemployment, civil war in Bosnia, an ugly resurgence of nationalism, Euro- s are looking for U. S. global leadership. with each American zig-zag, they see a rn to Carter-era fecklessness.

BLES. Foreign policy experts are unani- s on the root of the problem: Besides be- too fixated on domestic issues to delve international policy with any depth, Clin- and his advisers lack a coherent approach he post-cold-war world. Says Karl D. Jack- a National Security Council aide to rge Bush: "You can't shift constantly as do in domestic policy. The world is watch- " Even some Clintonites are now voicing view.

p to now, Clinton has not paid a severe e for missteps on Haiti, Bosnia, and So- a, since they don't threaten key U. S. in- sts. But that's not the case for pending vdowns. Beijing has called Clinton's bluff on his threat to oke preferential trade status over human-rights abuses. Clinton's pattern of empty threats is not lost on North ean dictator Kim Il Sung, who seems intent on building nu- r weapons. Clinton's vacillation makes it much tougher to vince Japan and South Korea that he's serious about im- ng economic sanctions on Pyongyang. "When you're trying et other countries to do things they're uncomfortable do- ing, they have to know you're committed," says Robert B. Zoellick, Under Secretary of State in the Bush Administration.

Clinton deserves credit for making economic interests a higher priority in foreign policy. Even critics praise his flog- ging of U. S. exports (page 28). And he has done better where he inherited a framework, such as the Mideast peace process, the GOP push for free-trade accords, and a drive to ex- pand economic ties with Asia. But when faced with new chal- lenges, the Administration is short on for- eign policy specialists with ideas, resolve, and experience—a price Democrats are paying for 12 years out of office.

CHANGES COMING? CLINTON, LAKE, AND CHRISTOPHER

What's to be done? Confidants want Clinton to shake up his foreign policy crew. He has replaced Les Aspin with William J. Perry at Defense, but they say he should find graceful exits for Secretary of State Warren M. Christopher, considered a weak statesman, and National Security Adviser Anthony Lake, an academic who is a poor policy implementer.

HELPING HAND. For now, Clinton isn't buying that counsel. But he might well turn to the White House adviser with the most foreign af- fairs experience—former Senate Armed Ser- vices Committee member Al Gore. The Vice- President has jumped in to help out on several occasions, such as taking on Ross Per- ot on free trade. Last fall, to make up for Christopher's weakness, Gore was asked to give several foreign policy speeches. Now he could help the White House set clear goals for a new era.

So far, Clinton has felt he could ignore foreign affairs be- cause his pollster keeps telling him that the public doesn't care. But unless he changes his ways, his stature as a world leader will keep shrinking, possibly provoking a crisis—this time, with adverse consequences for the Domestic President.

By Amy Borrus

PITAL WRAPUP

GULATIONS

The FDA will soon issue a long-await- ed policy for genetically engineered ds, which it hopes will satisfy both ustry and consumer groups. Manu- turers argue that most gene-spliced ducts are no different from old-fash- ed crops—and thus require no new ersight. But opponents say the FDA eds to conduct thorough safety re- ews of all biotech foods, such as matoes that are genetically engi- ered for long shelf life. The compro- se: Companies must notify the FDA fore marketing such products, but e agency will take only a quick look see if new genes make the foods dangerous. "We think this policy will be good for companies and for the con- sumer," says a top agency official.

CORPORATE PRIZES

The Baldrige Quality Award has been such a hit with business that Congress wants to establish more prizes. House Majority Leader Richard A. Gephardt (D-Mo.) is seeking Presi- dent Clinton's support for a bill to cre- ate awards for corporate excellence in productivity and innovation. Winners would share insights with other com- panies. Why duplicate the Baldrige? The Democrats look probusiness and companies get another chance to tout their quality.

ETHICS

Did Washington superlawyer Robert S. Bennett commit an ethical faux pas in agreeing to represent President Clinton in a sexual harassment suit filed by former Arkansas state em- ployee Paula Jones? Bennett also rep- resents House Ways & Means Com- mittee Chairman Dan Rostenkowski (D-Ill.), under criminal investigation by the Justice Dept. for misusing public funds. Bennett isn't violating lawyers' rules, but David C. Vladeck, litigation head of the watchdog group Public Cit- izen, says it creates the appearance of a conflict: Each client could influence the legal or political fate of the other.

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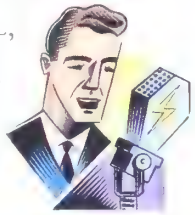

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VIETNAM

RISING FROM THE ASHES

CAN FREE MARKETS TURN VIETNAM INTO A TIGER?

At the mouth of the Red River, the first signs of an economically vibrant Vietnam can be glimpsed in Haiphong. Its harbor, once mined by the U. S., is being promoted as the industrial gateway to northern Vietnam. A Japanese consortium will spend $156 million to upgrade Haiphong's port. Nearby, South Korea's Pohang Iron & Steel is building a $25 million steel plant. And Taiwan's Ching Fong Group plans a $288 million cement plant.

If Haiphong represents Vietnam's potential, it also shows how far the country has to go to join the ranks of Asia's Tigers. The city's infrastructure is dilapidated after decades of war and neglect. Trucks, tractors, and motorbikes clog the highway from Hanoi, waiting to cross rickety wooden bridges. Near the heart of the city, old trucks, bicycles, and vegetable hawkers jam old ferries. Much of the work in Haiphong's shallow container port is done by huge, slow-moving Soviet-era cranes.

Throughout Vietnam, the end of the U. S. embargo in February has made evident the promise and perils the country faces as it tries to catch up to its Asian neighbors. Since President Clinton first permitted international aid to flow to Vietnam last year, it has received $2 billion in assistance and a rush of foreign investors eager to take advantage of $30-a-month labor costs. Moreover, Hanoi has managed to tame hyperinflation and a currency free fall—despite the collapse of its main trading partner, the Soviet Union. The economy is growing at an 8% annual clip, and exports and foreign investment are both increasing (chart).

But Vietnam remains one of the world's poorest countries. Per capita income among its 73 million people is just $220, and the country's bumpy highways, rusted bridges, and silted-up ports are among the most primitive in Asia. The financial system, legal framework, and chaotic bureaucracy are even worse.

To transform Vietnam into Asia's next dynamo, government planners have mapped out an ambitious strategy. The elements include a market-driven economy, liberal foreign-investment laws, and a private sector of small and midsize manufacturers. Hanoi also plans to create a new banking system, Western-style corporate law and accounting standards, and the legal framework for stock and bond markets. Its economic role models include Taiwan, Singapore, and South Korea (table). Communist officials also are studying the experiences of their counterparts in Beijing, hoping that rapid economic growth will allow them to keep their monopoly on power. But officials concede that the private sector will lead the way.

NEW MILLIONAIRES. Fortunately, Vietnam already has a growing private sector, one adept at thriving in chaos. Based mostly in the south, private manufacturers account for 34% of Vietnam's $500 million in light manufacturing exports, and output is set to grow 20% this year. The driving force is the 500,000-strong ethnic Chinese community, the main conduit of investment from Taiwan and Hong Kong. But there also are former South Vietnamese army officers who have finished terms in "re-education camps" and the offspring of old northern capitalists.

One of the country's new millionaires is Huynh Thanh Chung, 26, the grandson of landlords in Hanoi who lost vast

holdings after the revolution. A colle dropout with no formal business tra ing, Chung has built his family-own Hai Vuong Co. into a $50 million gro spanning construction, garments, a beer. Last year, he plunged into s food processing with a $3 million pla that ships 70% of its output to Jap "If we wait to gain experience," Chu says, "we won't be able to do anythin

HOW VIETNAM IS LEARNING FROM ASIAN NEIGHBORS

TAIWAN Borrowing from its experience in running large-scale export-processing zones for foreign investors

SOUTH KOREA Hoping to follow its lead in developing industries such as autos and electronics by protecting local companies from competition

SINGAPORE Planning to duplicate its liberal foreign-investment rules that allow majority foreign ownership in order to attract top multinationals in high-tech industries

CHINA Emulating its munist Party rulers by ing economic change while stifling challeng one-party rule

JAPAN Relying on h industrial planning fro some of its large com such as Mitsubishi, w has designed Vietnar auto master plan

PHOTOGRAPHS BY GREG GIRARD/CONTACT

★ HELLO WORLD: THE VIETNAMESE ARE NOW EAGER FOR INVESTMENT FROM MULTINATIONALS

ne trick will be channeling that enreneurial energy. Former Singapore ne Minister Lee Kwan Yew is helpadvise Hanoi officials on economic y. The U. N. Development Program DP) is giving hundreds of officials a h course in public administration. s for setting up capital markets are ely based on proposals prepared by U. N.'s International Finance Corp.

Vietnam's automobile master plan comes courtesy of Mitsubishi Corp., and an information technology strategy is from Unisys Corp.

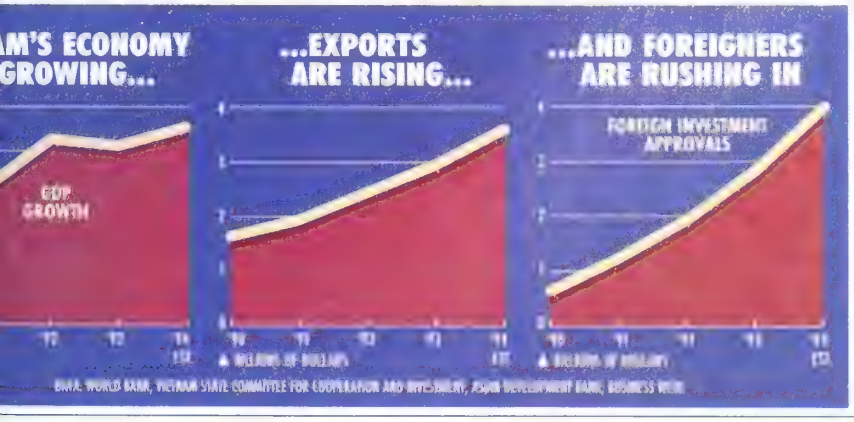
Ironically, the once implacable enemy is likely to be an asset for the U. S. Determined not to be dominated by Japanese, Chinese, or Europeans, Hanoi has reserved a major role for Americans in sectors such as oil, cars, and telecommunications. A preference for U. S. goods is one reason that Motorola Inc., for example, is confident it can make up for lost time against archrivals L. M. Ericsson and Alcatel. With only 20,000 pagers and a few thousand mobile phones sold so far, the real takeoff in demand hasn't begun. "I'm not too worried," says Frank Marciano, who heads Motorola's Hanoi office. "The opportunities for us are amazing."

Before these opportunities can be grasped, however, Hanoi must overcome some sizable obstacles. With low-cost Asian countries such as China, Indonesia, and India all competing for foreign capital, many prospective investors say that Vietnam has already become too expensive. In Ho Chi Minh City, rents in hastily constructed office towers go for $28 a square meter, and faxes start at $6 per page. Such hikes in office rents, as well as salaries and taxes, have investors asking whether Vietnam will price itself out of the market.

INTERNAL SQUABBLES. The country's takeoff also will be delayed until relations are normalized with the U. S. The end of the embargo opened the market to companies like Citibank, Mobil, and AT&T, but Vietnam's exports to the U. S. will be crippled until Washington grants textile quotas and most-favored-nation trade status. A quick move is unlikely. "That isn't even on the radar screen right now," says one State Dept. official.

The Vietnamese government, meanwhile, still faces internal squabbles pitting reformers, led by Prime Minister Vo Van Kiet, against hard-liners fearful of "conspiracies" by hostile foreign forces. The government also has to prove it will not waste financial aid through mismanagement and corruption. "The jury is still out on whether they can plan, deploy, and manage all the assistance," says Roy D. Morey, head of the UNDP's Hanoi office.

The problem is that so much must



be fixed. Besides the decaying infrastructure, few legal protections exist for investors. The bureaucracy, housed in run-down French colonial buildings painted in drab pinks and yellows, is so disorganized that collecting taxes, managing public finances, and forming industrial policy is almost impossible. Because of the arcane financial system, more than 60% of transactions are handled outside the banks. Big companies often settle debts by dispatching truckloads of dong, the local currency.

Still, Vietnam has proved its resourcefulness many times before. Before launching *doi moi*, or renovation, policies in 1986, mismanagement and war had left much of the country near starvation. To catch up, Vietnam is letting outsiders own as much as 70% of joint ventures in "strategic" industries such as cars, steel, and electrical power, thereby making it far more open than most other Asian countries at this stage of development. "We would like to build our own industries, but we are latecomers," explains Do Duc Dinh, president of the Institute on World Economics, a government think tank. "We have to rely on foreign capital."

★ HUYNH THANH CHUNG, THE GRANDSON OF RICH LANDLORDS WHO LOST THEIR HOLDINGS, IS NOW THE OWNER OF A $50 MILLION FAMILY BUSINESS

In many ways, the primitive state of Vietnam's economy is an advantage. Unlike other communist powers, Hanoi never made much progress building industrial white elephants. So it will be easier than in China and Eastern Europe to turn around big money-losing state enterprises.

BUILDING INFRASTRUCTURE. To revive the state sector, the government is planning ambitious financial reforms. Within two years, foreign financial institutions may be allowed to invest directly in stocks and make domestic consumer loans. "We are at the stage where Vietnam could change into a real market economy," says Nguyen Thieu, general secretary of the State Finance & Currency Council.

To get there, Vietnam will have to spend at least the next five years building infrastructure. Hanoi has earmarked most of the $1.86 billion committed so far by international agencies to building roads. Since Vietnam needs all the help it can get, it's throwing open projects for power plants, toll roads, and even new cities to foreign investors.

But first, Hanoi must get its act together on foreign-investment policies and cost control. Numerous projects have been delayed by disputes over rising costs or land rights. Some have been halted. Stung by statistics showing that less than one-third of the $7.7 billion in approved foreign investment since 1988 has actually come into the country, Hanoi is studying ways to streamline investment approvals.

Establishing a modern financial system is another priority. Hanoi estimates it must raise $40 billion in investment—half from private sources—and boost the savings rate from 11% of gross national product to 20% by 2000. "If we can't meet these targets," says the finance council's Thieu, "we cannot generate the funds for industrializing the country."

One encouraging sign is that Vietnam is becoming a hotbed for small software and computer startups. The school system has spawned legions of techies fascinated with information technology. "The cream of Vietnam's students are choosing computer engineering," says Luu Tien Hiep, deputy director of Ho Chi Minh City's Lotus College, where students use locally made PC clones and share old American textbooks.

KEEPING UP. Vietnam once harbored dreams of developing its own high-tech industries. But realism has set in, and wasteful programs in semiconductors, robotics, and aerospace have been scrapped. Still, Vietnam has thousands of electrical engineers earning around $100 a month. Many have managed to stay abreast of technological advances. Even though using U. S. computer networks was prohibited by the embargo, the Vietnamese were able to gain access to them through Australia. For instance, researchers at Hanoi's Institute of Information Technology kept up with the advances in fields such as artificial intelligence by tapping into Massachusetts Institute of Technology's database through the Internet. Today, those scientists and engineers are doing business directly with Digital Equipment, Oracle, and Microsoft.

Many experts believe that as early as by the end of the decade, Vietnam just may become a source of computer applications and design. "There is a lot of raw, sound talent," says Roger Stone, Indochina vice-president for Unisys. "With their entrepreneurial flair, the

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That is Vietnam's greatest asset: its people. Millions of Vietnamese have worked very hard to survive against tremendous odds. The country's education system has not only produced widespread literacy, but it has also allowed many workers to acquire valuable skills such as proficiency in English and computers.

Take Tran Ba Thai, one of Vietnam's top computer engineers. As a teenager in the late 1960s, Thai grew up in a small village that was a Viet Cong stronghold and was regularly subjected to attacks by American warplanes. Between air raids, he attended makeshift schools, including one in a cave, and studied English by listening to the Voice of America at night.

Today, Thai, 43, speaks English fluently and can work directly with big American computer companies. Says Thai: "With the end of the embargo, we have a chance to develop." Nearly 20 years after the fall of Saigon, the Vietnamese finally hold their economic destiny in their own hands.

By Pete Engardio in Hanoi, with Bruce Einhorn in New York

'THEY'VE BEEN EXTRAORDINARILY WELCOMING'

You couldn't have asked for a more curious gathering than the one in the stately lobby of Hanoi's Metropole Hotel. There stood none other than retired Major General Richard V. Secord of Irangate fame, who during the Vietnam War flew hundreds of bombing raids over the North. His entourage included an ex-U. S. intelligence officer and a former North Vietnamese general who ran the oil pipeline on the Ho Chi Minh Trail. "With all our millions of tons of bombs," says a Secord associate, "we could never destroy the pipeline."

The reunion among old enemies was all business. As president of American Recovery Corp. in McLean, Va., the man who tried to bomb Hanoi into submission is now trying to secure petroleum-industry deals for American engineering companies. "I anticipated there would be hostility," Secord says. "But I have not found any yet."

CHARGE IT. The heavy artillery of Corporate America is back in force, too. PepsiCo, Coca-Cola, Procter & Gamble, and Colgate-Palmolive are beginning their assaults on consumers. To make those purchases, Bank of America and Visa are trying to get Vietnamese to use credit cards. Such companies as General Electric, Brown & Root, and Motorola are angling to fill Vietnam's desperate need for transportation, power plants, and telecommunications. From Apr. 21 to 24, when over 50 U. S. multinationals set up exhibits at a trade fair in Hanoi, several thousand Vietnamese poured into the exhibit hall carting away everything from Zippo lighters to IBM pamphlets.

Like Secord, most U. S. executives are finding the doors wide open. "They've been extraordinarily welcoming," says Stephen J. Brandon, Southeast Asia vice-president for General Electric Co., which is discussing major deals in power plants, aircraft leasing, and medical equipment. Even the early lead by rivals from Europe and Japan has not shut U. S. companies out.

★ AMERICAN CONSUMER COMPANIES ARE MOVING IN FAST, AND HEAVY INDUSTRY MAY SOON FOLLOW

Consumer-products companies were the quickest off the mark. The market is much bigger than Vietnam's $220 per capita income suggests. An estimated 200,000 Vietnamese families receive an average of $2,000 each year from relatives overseas. And in Ho Chi Minh City, "there is a driven and determined middle class that remembers what it's like to be prosperous," says John Englehart, general manager of Ogilvy & Mather Ltd.'s Bangkok office.

They also remember U. S. brands. A 1992 survey found that products such as Zest soap and Kleenex tissues purchased on the black market were outselling local ones even though they cost three times more. For high-end products, though, multinationals must develop the market.

HOSPITAL SEMINARS. Take GE's medical-equipment division. Vietnam has just two CAT scanners, and most X-ray machines were left behind by the U. S. after the war. To familiarize doctors and health officials with its technology, GE has flown dozens to the U. S. and conducted hundreds of seminars at hospitals and medical schools in Vietnam.

American companies are gaining in Japanese and European strongholds. France helped Vietnam during the U. S. embargo, but Boeing is now contending with Airbus Industrie to supply many of the $1 billion in aircraft for Vietnam Airlines. The government is talking with Chrysler Corp. about entering the auto market even though Mitsubishi Motors Corp. got there first.

By getting Americans involved in its markets, Hanoi hopes that the U. S. will have more interest in normalizing relations and granting trade privileges that also would make China's fast-expanding military think twice about invading again, as it did in 1979. As bizarre as it may sound, Vietnam could emerge as one of America's best partners in Asia.

By Pete Engardio in Ho Chi Minh City, with Ken Stier in Hanoi

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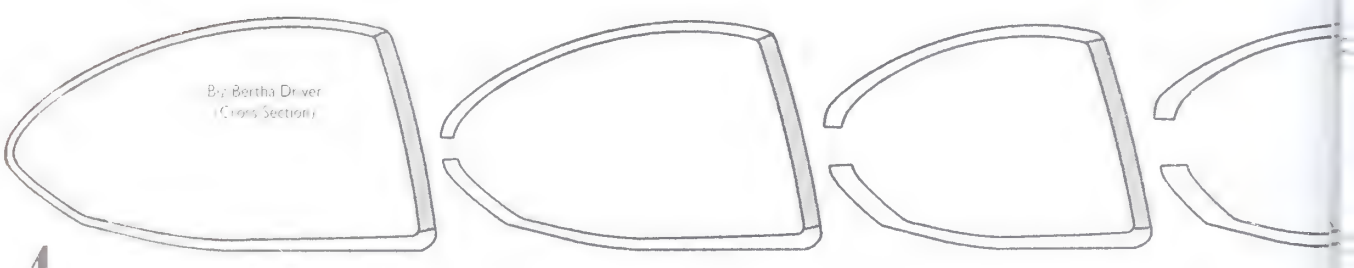

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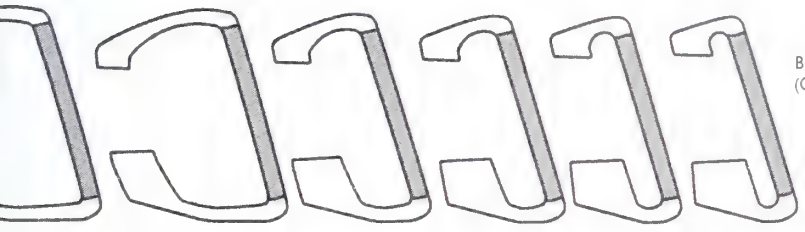
8. The **SHORT HOSEL** or **S2H2®** technology not only allows us to distribute more weight to the hitting area but also means that the club is less likely to get tangled and close down in the rough, causing some frightening shots. The Big Bertha Iron, which is offered with a choice of three lie angles: standard, two degrees upright and two degrees flat, is a precise and unique instrument aimed to put a smile on the face of the pro and amateur alike.



Big Bertha Iron
(Cross Section)

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JAPAN

THE CHEAP BUCK GIVES JAPAN A YEN FOR ASIA

Tokyo is pouring even more investment into its own backyard

To Eijiro Hata, head of Japan's Ministry of International Trade & Industry, the yen has soared to a "crisis level." Backing Hata up, Finance Ministry officials suggest the Bank of Japan is prepared to buy as much as $3 billion a day if the yen rises past the critical barrier of 100 to the dollar.

But while Tokyo officials struggle to keep Japan competitive by fighting to restrain the yen, the nation's exporters are hardly sitting still. They are starting to pour billions into Asia again to take advantage of the region's low wages and close ties to the cheap buck. In so doing, they are creating a powerful new trading force—an Asian dollar bloc with Japan at its core.

The strategy behind the creation of this trading bloc is clear. By placing large amounts of industrial assets in Asia's dollar zone, Japanese manufacturers are trying to dominate local sales and fend off U. S. competition while furthering their own exports to the rest of the world. They are also generating jobs for Japan's sluggish economy. Although many manufacturers are moving offshore—and trimming payrolls—to flee the high costs of producing at home, the plants they are commissioning are themselves boosting export orders for new equipment. Some think this upswing could last for five years.

TRADE FRICTION. With the yen up 7% against the dollar since the beginning of 1994, there is no doubt that Japan's move to make everything from beer to ball bearings in Asia is speeding up (table). Minebea Co., for example, announced recently that it will spend $22 million on a new bearing plant in Shanghai. Audio gear maker Aiwa Co. will lay out $43 million to double its output in Malaysia. Suntory Ltd. is expanding its brewery in China's Jiangsu province. And Osaka-based fiber maker Kanebo Ltd. is putting $18 million into an Indonesian subsidiary.

With the yen unlikely to weaken very much, international investment experts think the new outflow of Japanese cash is only beginning. "As the yen strengthens, the Japanese simply will not be able to produce things at home," says Asian Development Bank economist Malcolm Dowling. "The rest of Asia would love it."

It's not hard to see why. After tapering off in the early 1990s, Japanese investment in Asia rose from $5.9 billion in 1991 to $6.2 billion in 1992 and an estimated $7.4 billion in 1993. But financial sources think these figures understate the total of Japanese offshore investments by as much as 40% because they ignore the reinvested profits of thriving Asian subsidiaries. For example, poor results at home didn't stop Honda Motor Co. from making plans to plow $29 million into a Thai body-parts plant. And Toyota Motor Corp.'s Thai unit is spending $50 million to boost its local car and truck output by 115,000 vehicles a year.

There's a big difference between the latest investment wave and the first outpouring of Japanese money a decade ago. Back then, the Japanese were after a new export platform, and the target markets were still Europe and North America. Now, Asian nations are running up against trade friction with Western nations. So Japanese companies are aiming for domestic markets. MITI estimates that two-thirds of all the goods produced by Japanese manufacturers in Asia are now sold locally.

HANGING TOUGH. The growing Japanese presence in Asia may complicate Washington's trade relations with the entire region. MITI chief Hata hinted on May 10 that Japan next month may return to trade talks with the U. S., which broke off last winter. President Clinton has also suggested that negotiations will resume.

But as Japanese manufacturers move into Asia, the battleground is widening. In fact, Japan's deepening involvement in Asia could pose a threat to U. S. manufacturers vying for the region's fast-growing markets. The Asia push will also provide Japanese companies with a powerful weapon against American competition at home: low-cost imports from their own plants and other Asian suppliers. NEC Corp., for example, is now buying application-specific integrated circuit (ASIC) chips for cellular telephones from Taiwan Semiconductor Manufacturing Co. And Mitsubishi Motors is talking to South Korea's Pohang Iron & Steel Co. about buying cold-rolled sheet steel for use in car bodies.

In moving into Asia with such alacrity, Japanese manufacturers are once again demonstrating their ability to adapt to one shock after another. Just because the yen is trading at close to 100 to the dollar, there's no reason to assume that Japan's competitive powers will vanish any time soon.

By Larry Holyoke in Tokyo and David Lindorff in Hong Kong

MINEBEA'S THAI BALL-BEARING PLANT: NEXT STOP, CHINA

JAPANESE COMPANIES LAUNCH A NEW PUSH INTO ASIA

Planned manufacturing investments

Company	Country	Product
ALPS	CHINA	Magnetic heads
EPSON	SINGAPORE	Semiconductors
FUJITSU	THAILAND	Floppy-disk drives
HITACHI	MALAYSIA	VCRs
MATSUSHITA	CHINA	Big-screen TVs, VCRs, cassette recorders
NINTENDO	CHINA	Game Boy machines
SANYO	SINGAPORE	CD players
SHARP	PHILIPPINES	Washing machines
SONY	CHINA	TVs, CD players, camcorders
TOSHIBA	THAILAND	Cathode-ray tubes for PCs

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'THIS IS CAPTAIN FERGUSON, PLEASE HANG ON TO YOUR HATS'

The CEO of Continental, who once made deals for Frank Lorenzo, is planning some risky maneuvers

Although Bob Ferguson has long since given up his dream of getting a pilot's license, he remembers well one scary incident from his flying days more than 20 years ago.

Now the chief executive of Continental Airlines Inc., Ferguson was then a student pilot trying to navigate cross-country to a specified airport in Pennsylvania. After flying along confidently for what seemed like enough time, he still couldn't see his destination. Worse, he realized that his radio was broken and he hadn't been plotting his progress on a map. Panicking, he finally spotted another airport with the name of the town painted on top of the hangar. With the aid of his map, he located a nearby highway and followed it to his original target.

FERGUSON: PUSHING OUT KEY TALENT?

MIXED MESSAGE? Robert R. Ferguson III is still navigating with few guideposts. Although last year he deftly guided Continental out of its second bankruptcy filing in less than a decade, this year he's steering into uncharted territory, both personally and strategically. Ferguson, 45, made his name as a crack airline financier—first as a lender at Bankers Trust Co. and then as a dealmaker under former Continental Chief Frank A. Lorenzo. But he has never run a healthy airline on his own, and the course he has chosen for Continental is unusually risky.

Ferguson's plan is to split Continental, which had 1993 revenues of $5.8 billion, into two distinct operations, both capitalizing on the carrier's low costs. The first, informally known as CALite, is trying to imitate the phenomenally successful strategy of Southwest Airlines Co., a no-frills carrier with frequent short-haul flights and cheap fares. The second encompasses Continental's long-haul and international business, including its "BusinessFirst" product, which features first-class service at a business-class price. The hybrid game plan is already posing complex fleet-management problems and risks imparting a mixed marketing message. Says one institutional investor: "CALite could either be extremely successful, or it could bankrupt the company." Again.

Ferguson's strategy does seem compelling in an industry where consumers are increasingly obsessed with finding the lowest fares possible. And given its already-low cost structure, Continental is far better positioned to pursue such a strategy than such competitors as usair Inc. or Delta Air Lines Inc. But the key question is whether Ferguson has the management moxie to pull it off. Though he aims to mimic Southwest, that airline has an 18% cost advantage over Continental (the gap is even greater on short-haul flights). And Southwest Chairman Herbert D. Kelleher is widely considered one of the industry's best managers—a master at creating a team-oriented, give-it-your-all culture that draws extraordinary productivity from his workers.

Continental has come a long way from the internal warfare engendered by Lorenzo. But current and former employees worry that Ferguson's management style—described as often harsh and uncommunicative—is creating turbulence and driving away key executives. Since he took over in 1991, at least a dozen managers have left, some of them pushed out. A source close to the company says at least a dozen more are quietly job

FLIGHT PLAN FOR PROFITS

CEO Ferguson's bid to get the carrier back in the black:

COST-CUTTING Plans to slash 1,000 jobs by yearend, including 7% of management

MORE PEANUTS Expanding CALite's low-cost "Peanuts Fares" from 26 cities to 45 starting in June

MANAGEMENT HELP Cut several layers, but hired key executives for top posts from Boeing, American, Southwest, and the former Braniff

BOOSTING MORALE Expects to restore full pay and give employees a 4% stake in the company

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ting. "People are fleeing the ship
are instrumental in guiding it," the
rce says.
Robert Rowen, former deputy general
nsel at Continental, recently left to
Reno Air Inc. because he believed
re were few opportunities for promo-
. He saw Ferguson's management
e this way: "It was very pointed,
n nasty. If he doesn't like an idea, he
ns to go out of his way to ridicule it."
a dinner in New York to celebrate
closing of the Continental reorgani-
on, Rowen recalls kidding Ferguson
he couldn't see him "dressing up in a
ken suit like Herb Kelleher," a refer-
e to the Southwest chief's unortho-
motivation tactics. Ferguson, Rowen
s, scolded him for criticizing CALite
not being a team player. Ferguson
s he doesn't remember the incident.

STIC RETORTS. Rank-and-file employ-
meantime, appear divided on Fer-
on's style. Richard M. Smith, a 24-
r Continental pilot, remembers a
ent meeting with employee groups
ere Ferguson answered questions

The question is: Can Ferguson compete against Southwest's Kelleher, one of the industry's best managers

n a series of biting retorts. "He can't
st reverting to Lorenzo-style man-
ment," Smith grumbles. Another
on source, however, insists most
kers embrace the new strategy and
Ferguson's candor. "He's not a de-
us man," the source says. "He'll tell
what he thinks."
Ferguson denies that his management
e is creating any problems. He ad-
s that he is blunt and plainspoken.
that has served him well with cred-
s and directors in the past. "I do not
er fools well," he says. "I will not
rate not doing a good job. I will tell
in front of yourself, 20 people, 100
ple." Given Continental's recent tur-
l, morale is bound to wane, he adds.
help matters, he plans to reinstate
that was cut during the bankruptcy,
he plans to give employees 4% of
tinental's stock.
Ferguson has always done things his
way. "He was kind of an under-
ever," says his father, Robert R. Fer-
on Jr., the former chairman of New
sey's First Fidelity Bancorp. of
vark. A bright but indifferent stu-
t at Lehigh University, the younger
Ferguson was kicked out for poor grades after his sophomore year. He says the problem was that he spent more time partying with fraternity brothers than studying. Long enamored of mechanical things, Ferguson was maintenance chief for the frat-house fire truck. He is currently restoring a '67 Corvette.

In 1969, Ferguson says, he entered what he jokingly calls his "sabbatical period." He pumped gas at an airport, took flying lessons, and worked the night shift at a factory packaging quarts of oil. The grimy work convinced him that he should return to Lehigh, where he graduated in 1972 with a degree in finance and economics. By then he had already been married and divorced.

Ferguson finally settled down after college and started his career at Bankers Trust, where he lent money to airlines and aerospace companies. Financially troubled Braniff Airways Inc. was a client, and in 1981, the company offered him a job as treasurer. By 1982, Braniff filed for Chapter 11, and Ferguson arranged its sale to Chicago's Pritzker family. He stayed on long enough to meet his second wife, Kathryn, who was then a Braniff reservations supervisor. The two met at an after-work hangout in Dallas called The Cockpit the day Ferguson had announced plans to slash half the Braniff workforce. A few weeks later, unbeknownst to Ferguson, Kathryn's name landed on the layoff list, and she lost her job.

By 1985, Ferguson hired on at Texas Air Corp. to help Frank Lorenzo buy new airlines. Together, they snapped up People Express, Eastern Air Lines, and Frontier Airlines. Former colleagues say Ferguson played little part in shaping Lorenzo's fateful labor strategy, which led to a bitter strike at Eastern and its eventual demise. But to keep Eastern afloat, Ferguson spearheaded the controversial sale of the airline's assets. "Bob was an implementer," says a former Eastern executive.

HARD FEELINGS. While Ferguson denies that he has "people skill" problems, he has surrounded himself with managers well-regarded on that score. Early this year, pressed by Texas financier David Bonderman, Continental's biggest investor, Ferguson hired as president Gordon Bethune, a well-liked Boeing Co. executive. Also on the team are Chief Financial Officer Daniel P. Garton, hired from American Airlines Inc., and marketing chief Donald G. Valentine, who worked closely with Kelleher at Southwest. Helping with employee relations is Howard D. Putnam, Ferguson's boss at now-defunct Braniff.

Bonderman, whose investment group

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The reengineering effort identified substantial savings, and targeted opportunities for achieving 20 – 30% in long-term cost reductions. Development and introduction time for new products was reduced by 50%, and numerous customer-focused innovations were developed to increase customer satisfaction.

"The Best Practices approach was instrumental in helping GTE see not only where it needed to improve, but more importantly, provided creative insights on how to do it," says Robert J. Hiebeler, the partner responsible for Arthur Andersen's Global Best Practices Knowledge Base.

Said David P. Allen, who was responsible for GTE's benchmarking initiatives: "Discovery of Best Practices proved to be the critical success factor in stimulating innovations during the process redesign phase of our reengineering team's work. Arthur Andersen's support was instrumental in enabling this discovery to occur rapidly and effectively. As a result, we are well on our way of achieving our vision of market leadership."

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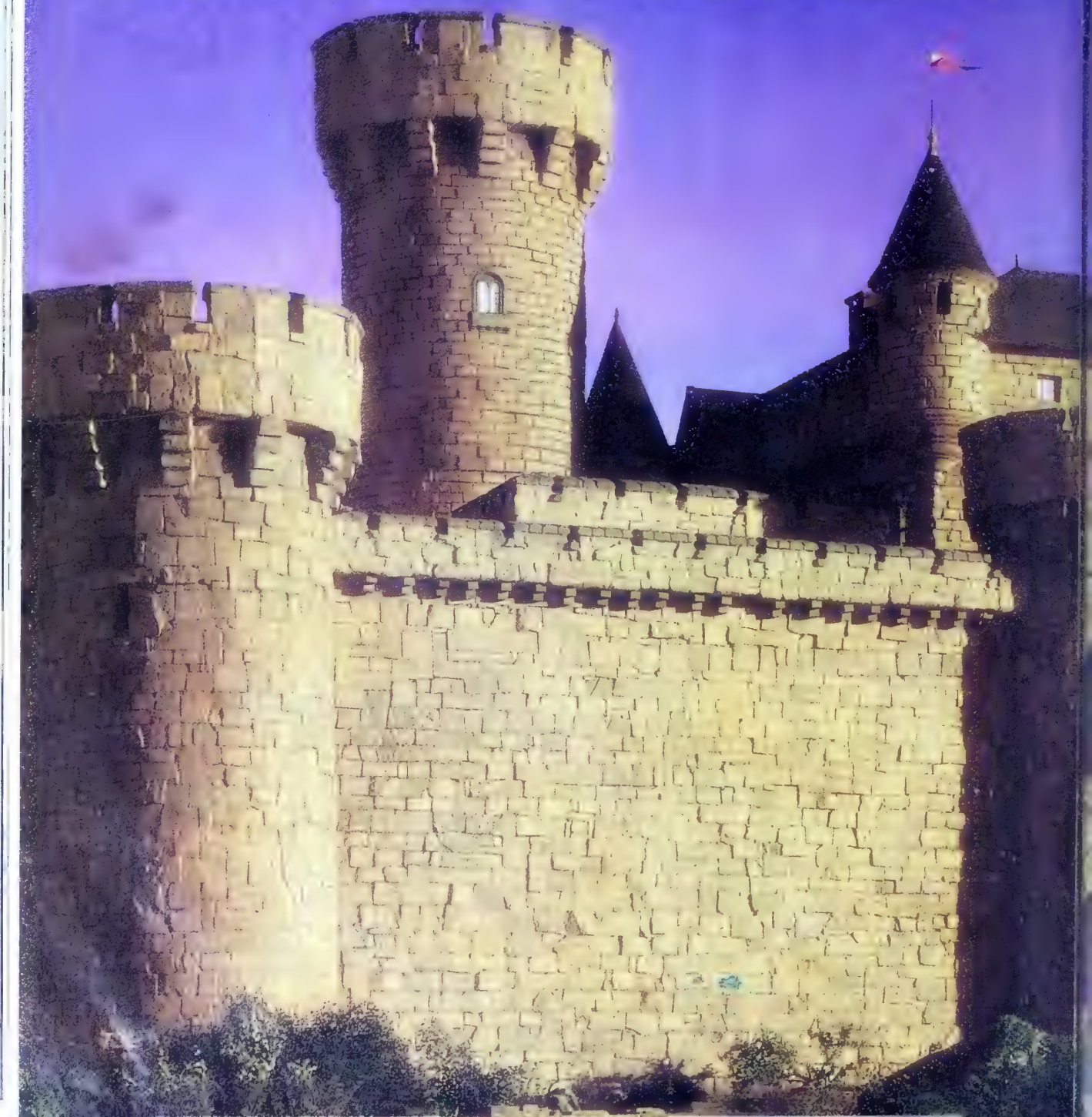

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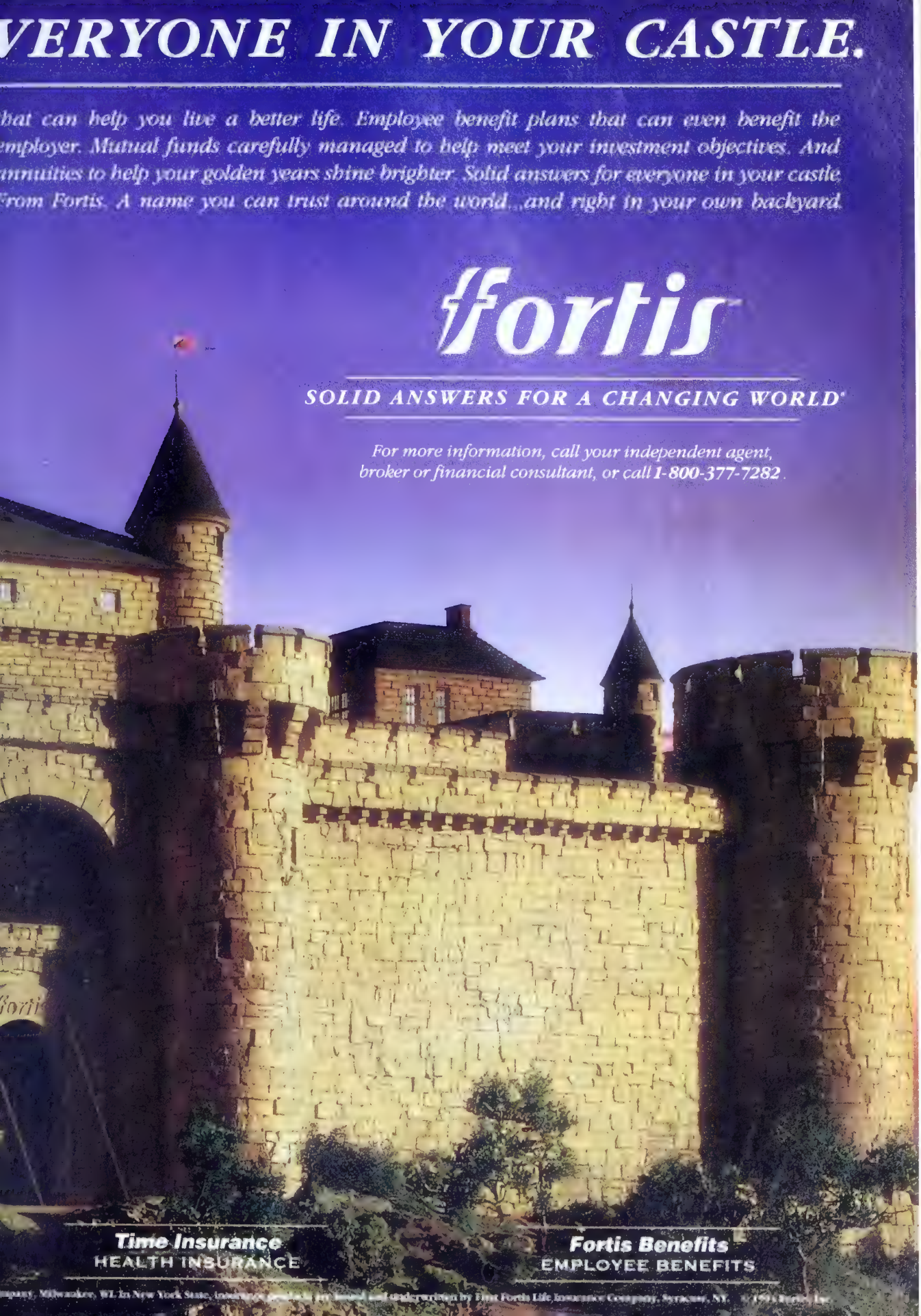
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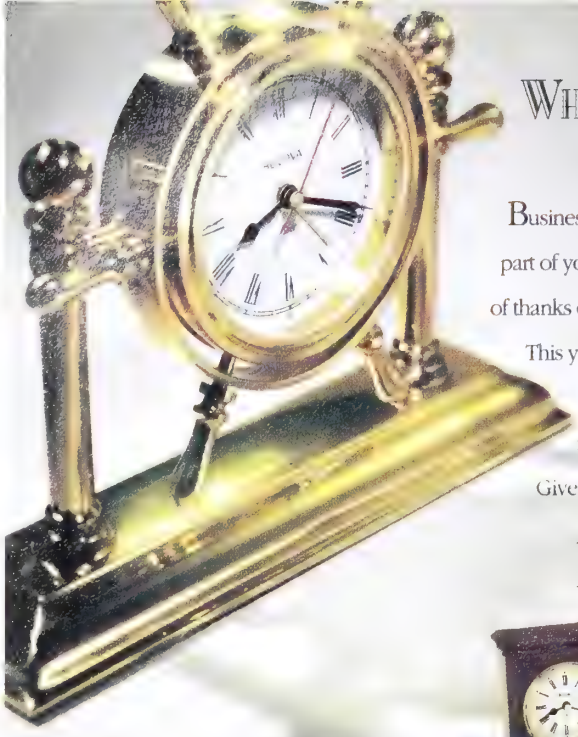

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controls some 36% of Continental, say he has no problem at all with Fergu son's style. "There are occasionally pe ple who like to have things sugarcoate and Bob is not the guy who will d that," he says. Air Canada CEO Holl L. Harris, however, is not so charit ble: "Ferguson has to become more pe ple-oriented and depend more on th recommendations of his managemer team," he says.

Given that Air Canada also owns big stake in Continental—with 24.5% the vote—Harris' opinion certainly count But he is hardly a disinterested observe when it comes to Ferguson. A forme president of Delta, Harris was hire away by Continental's board in 1990 t replace the ousted Lorenzo. Trouble wa he clashed with Ferguson, then head corporate development, and alienate board members by moving too slowl Harris left Continental and landed at A Canada. He's only involved now becaus Bonderman courted the Canadian carri to help him finance Continental's eme gence from bankruptcy.

STARTUP PAINS. Such politics only mak Ferguson's job harder. And it doesn help that the new CALite operation experiencing startup pains. While Fe guson insists that CALite is on schedul he concedes that it "has not operate very efficiently" since mid-December. Fo instance, the airline sometimes didn have the necessary maintenance perso nel and spare parts ready to assure tha airplanes moved in and out of the gate i the hoped-for 20 minutes. The problem contributed to Continental's $71.6 millio first-quarter loss.

But some observers, including S lomon Brothers Inc. analyst Julius Ma dutis, expect the CALite strategy to pr duce profits as early as next year. Th reason: By then, 1,000 more jobs wi be pared as Ferguson continues to cu costs. And CALite will represent at lea half of Continental's domestic capacit Ferguson is targeting the East first avoiding Kelleher in as many markets a he can. "Why should we beat up on eac other?" Ferguson asks. He'd rather cha lenge high-cost airlines.

To be successful in the long run, hov ever, Ferguson will also have to creat the kind of environment that motivate employees to be productive. For no his directors are confident he'll be ab to pull it off. "I think he can run an ai line," says board member Karen Hast Williams. "He has really been his ow best student." Time will tell if he earns passing grade.

By Wendy Zellner in Houston, wi William C. Symonds in Toronto

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REACHING FOR CANCER'S ON-OFF SWITCH

New gene-correcting drugs represent a major change in approach

Dr. Arnold J. Levine is hardly celebrity material. The unassuming Princeton University researcher is "Arnie" to nearly everyone. He presides over a couple of dozen graduate students and post-docs who say his lab is "fun"—especially the weekly poker games and interlab basketball contests. Yet the chairman of Princeton's molecular biology department is suddenly in the limelight as co-discoverer of one of cancer research's hottest properties, a gene called p53. More than 1,000 papers have already been published on p53, which *Science* magazine named its "Molecule of the Year" for 1993. That's "science's equivalent of the Academy Award," says Dr. I. Bernard Weinstein, director of Columbia-Presbyterian Cancer Center in New York.

The p53 gene is a star, says Richard L. Gelb, chairman of Bristol-Myers Squibb Co., because it just may be the "most important gene in the development of human cancers." Some 60% of all tumors—including 70% of colorectal, 50% of lung, and 40% of breast cancers—contain a damaged copy of p53. That makes it and two other multiple-cancer genes, ras and MTS1, potential gold mines. Drugs that could counteract or repair rogue versions of these genes could be blockbusters medically and financially. Or so think more than a dozen drug companies that are researching such products.

LEVINE: LOCATING CELLS' FIXIT MECHANISM

DELICATE BALANCE. The effort to develop gene-correcting drugs is "the beginning of a major change in the philosophy of treating cancers," says Levine. Researchers expect more discoveries of multiple-cancer genes. And understanding the role they play may bring medicine a giant step closer to an urgent goal: catching cancer at its very origins in a cell. Over the past two decades, scientists have discovered some 100 genes that are involved in transforming a healthy cell into a quickly dividing and pernicious tumor. Some, called oncogenes, switch on cell division—the means by which cells replicate themselves. The second group, called tumor-suppressor genes, switch off that division. In their unadulterated state, these genes maintain a delicate balance—providing new cells when needed and putting on the brakes to prevent overgrowth of damaged cells.

Cancer occurs when this balance is disrupted. Take the ras gene, which Frank McCormick, founder and vice president for research at Onyx Pharmaceuticals Inc., says is involved in an estimated 90% of pancreatic cancers, 50% of colon cancers, 40% of lung cancers, and 30% of leukemias. It is found in all human tissues and directs the production of proteins that can help signal a cell to start dividing. When it's damaged, how

the ras gene generates a rogue
ein that signals cells to grow un-
ollably.
he opposite is true for p53 and
1. The p53 gene's normal role is to
ol the damage when a cell's DNA is
ed. This happens frequently, Le-
says, because people are continual-
xposed to such environmental in-
as cigarette smoke or ultraviolet
Unchecked, cells with damaged
may grow into tumors. But, like
spector on an auto-assembly line,
eeps those cells from dividing until
DNA can be repaired. If the cell
ates anyway, p53 can initiate "pro-
med cell death"—a hit squad of oth-
nes that kill damaged cells.
e new MTS1 gene, announced in
pr. 15 *Science*, is also a "molecular
e," says Alexander Kamb, a re-
her at Myriad Genetics Inc. in Salt
City. Myriad identified the gene
y with researchers at the Univer-
f Utah Medical Center. Kamb says

A NEW QUEST FOR CANCER DRUGS

ng of companies that want to base products three major cancer-causing genes:

	Product
Implicated in colon, lung, breast cancer	
nn-La Roche, Oncogene	*Diagnostic tests*
Becton Dickinson	
ene/Pfizer, Merck, Bristol-	*Therapeutics*
uibb, Onyx, Pharmagenics	
: Therapy	*Gene therapy*
Pancreatic, colon, lung, leukemia	
ma/Pfizer	*Diagnostics & therapeutics*
ech, Merck, Eisai,	*Therapeutics*
Therapy	*Gene therapy*
Brain, breast, melanoma	
Genetics	*Diagnostics & therapeutics*

1—which is implicated in cancers of brain, bladder, breast, lung, and in skin cancer melanoma—directs the uction of a protein called p16 that ually keeps cells from readying selves for division. When the gene maged, cells divide uncontrollably. ecause MTS1 is newly identified, research based on it is just start- But Myriad scientists are already ing on a screening test that could show which members of families at risk for melanoma carry the faulty gene. These people could then have frequent checkups that would turn up the cancer early—when it's most easily treated.

Drug companies are further ahead in targeting the proteins made by the other two genes. In the case of p53, says Gordon Foulkes, chief scientific officer at Oncogene Science Inc., researchers are exploring several approaches that affect the protein's different roles in a cell. When p53 is damaged, it acts like an oncogene—promoting tumor-cell growth. One strategy is to find drugs to block that new action. Researchers also believe that certain chemicals may convert the damaged p53 protein back to a normal one—restoring its braking function. In another approach, scientists are hunting for compounds that mimic that effect.

What particularly excites drug companies is that when a normal p53 gene is put back into tumor cells in a lab dish, it can stop their growth. That's important because in every tumor, several rogue genes are often at work—at least six in colon cancer, for example. "The idea that you could correct just one of the signaling defects within a tumor cell and revert it back to a normally functioning cell is fantastic," says James C. Marsters Jr., a scientist at Genentech Inc. in South San Francisco.

TARGET. So far, companies are being closemouthed about p53 drugs. But Foulkes says Oncogene has "early leads." It also has a $3.5 million investment from Pfizer Inc. to screen and develop such compounds. Hoffmann-La Roche; Pharmagenics in Allendale, N. J.; Onyx; and Bristol-Myers are also in the running. "We are looking intensively at p53 as a potential target," says Nikolai A. Kley, a senior research investigator at Bristol-Myers.

Work is even further along on the ras gene. Last June, two groups of researchers, one from Merck Research Laboratories in West Point, Pa., and the other from Genentech and the University of Texas Southwestern Medical Center in Dallas, announced that they had found drugs that block the cancer-promoting effects of a mutated ras gene. On May 3, Onyx announced a five-year joint deal with Miles Inc. of Pittsburgh to develop such drugs.

The normal function of a protein created by the ras gene is to sit on the cell membrane and receive "on" signals

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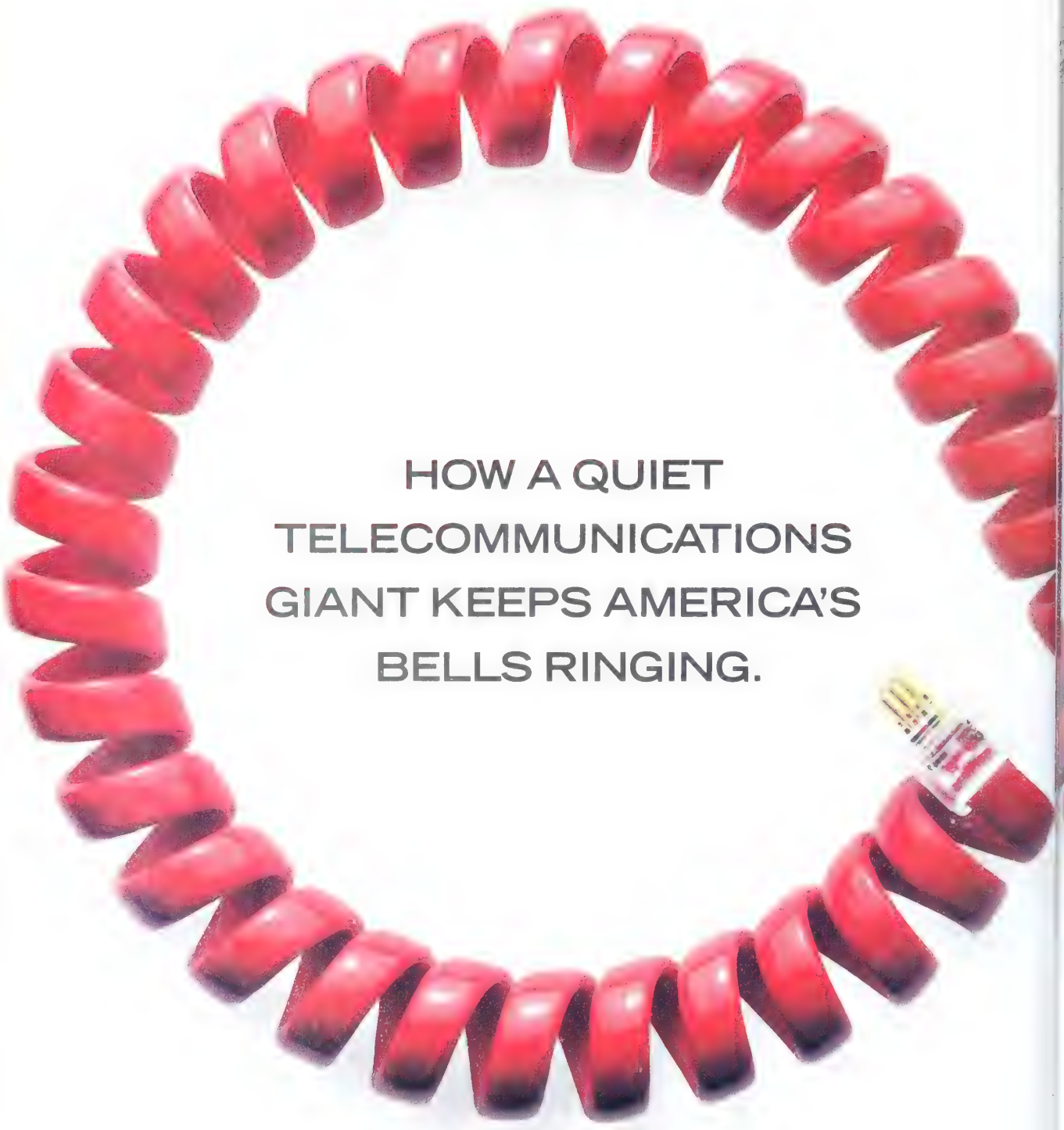

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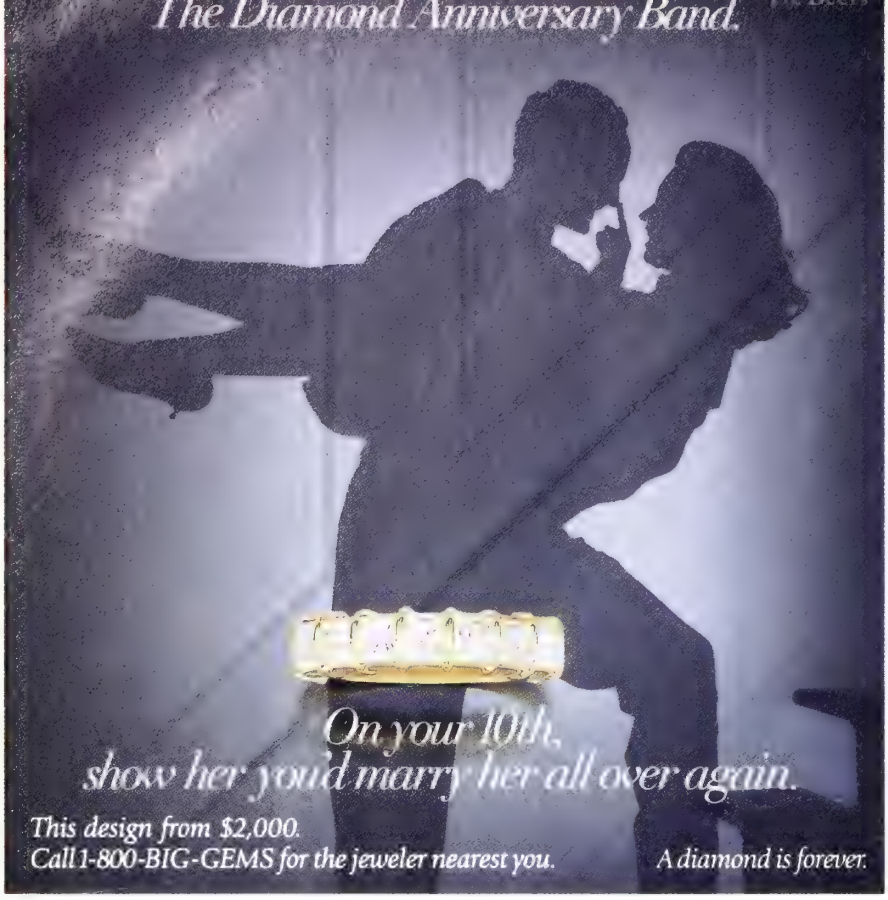

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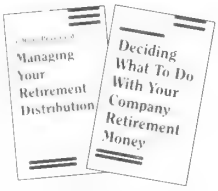

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from so-called growth factors. This mes sage is then relayed back inside the ce and promotes cell division. A mutate ras gene essentially keeps the "on" signa going continuously by churning out ra proteins. Both Merck and Genentech ar working on refining drugs that block crucial step in the formation of ras pro teins. These drugs would ultimatel keep the proteins from taking their plac on the cell membrane.

Genentech's Marsters says he's cau tiously optimistic about his company' efforts, but that "we're probably three t five years from knowing if we hav something useful or not." One problem i that it isn't clear yet if the new drug would interfere so much with the norma function of ras genes as to be highl toxic. So far, says Marsters, it appear that cells with a mutated ras gene ar more sensitive to the drugs than ar normal ones. "That's really exciting i terms of developing a compound furthe down the road," he adds.

In the meantime, the first benef from stepped-up research will probabl

Diagnostic tests for all three cancer genes could be the first benefit of stepped-up research

be diagnostic tests for all three cance genes, says Dr. Bert Vogelstein, profe sor of oncology at Johns Hopkins Un versity School of Medicine and a pi neer in the genetics of colon cancer. H and his colleagues are trying to devis tests that can look for a mutant ra gene in human stool samples. Other including Oncogene—with Becton, Dicki son & Co.—and Roche, are working o diagnostic tests for mutant p53. Earl detection can save lives. The cure rat for colon cancer is about 90% when th tumor is limited to the inner lining the colon, says Vogelstein, vs. 10% onc the tumor has spread. He adds tha "progress in cancer will first come gains in prevention"—which should b aided by identifying people with dan aged genes.

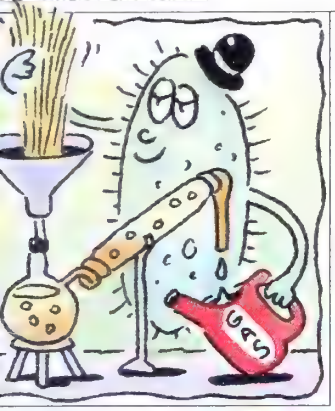
As for therapies targeted to erra genes, experts say it will probably be decade before they're available. "It's g ing to require as much creativity, har work, and luck to discover such con pounds as it took to discover the gene themselves," says Vogelstein. Still, h adds: "It's not a matter of if, but wher

By Naomi Freundlich in New Yo

evelopments to Watch

BY JUDY SILVERMAN

GS THAT TURN STRAW TO AUTO FUEL



British farmers are knee-deep in straw. They produce more than 10 million tons a year as a byproduct of farming and their animals need only 4 million tons for bedding and food. Since European air-pollution laws prohibit the burning of straw, the excess is plowed under or left to rot.

Scientists have now genetically altered a -loving bacterium, *Bacillus stearothermophilus*, to put the w to good use. At a temperature of 190F, it eats the icellulose fiber that makes up 30% of the straw and con- s it into ethanol, which can be used as a gasoline additive hemical base. It also eats the hemicellulose in corn cobs, a r source of agricultural waste in the U. S. Yeast, which is lly used in fermentation, doesn't work on hemicellulose. developers of the bacteria strain are Brian Hartley, re- l director of the Centre for Biotechnology at Imperial ege in London, and his associate Namdar Baghaei-Yazdi. y have formed a company, Agrol Ltd. of Hampshire, En- d, and hope to sell the bacteria within three years.

W, AIR FORCE COMPUTERS Y HOME IN ON TUMORS

adiologists rely on the images produced by CAT scanners, MRI machines, and X-rays to diagnose tumors. But much he information in the digitized pictures is too dense or too le for doctors to make sense of. Computer systems origi- y designed to seek out enemy tanks could help. Consultant ., Allen & Hamilton Inc.'s technology arm in McLean, is collaborating with the U. S. Air Force's research labo- ry in Rome, N.Y., and with Cornell University Medical Col- in New York to adapt military computer systems to de- small malignant tumors at an early stage.

he partners are using advanced computer techniques d neural networks that quickly learn to recognize suspect cts—be they tanks or tumors—given enough examples of patterns of these images. Over the next four months, scientists expect to train the military's neural nets on the CAT scans of 80 patients. Neural networks could also ther digitized X-rays and MRI scans. They should help doc- distinguish between malignant and benign tumors with e confidence and reduce the number of biopsies.

R SOME, CREATIVE WORK ULD BE A KILLER

you're a Type A personality—impatient, aggressive, and mpetitive—and if you have a job that requires varied s, autonomy, prolonged training, and creativity: Watch out. n work may not be good for your health. At least that's t researchers from the University of Nebraska and the University of Kansas concluded from one of the first studies designed to gauge the impact of job complexity on health.

The study monitored 110 people employed in police and firefighting units over seven years. Employees with Type A personalities holding complex but low-stress jobs were 2½ times as likely as Type A personalities overall to have cardiovascular problems, including hypertension, angina, and heart disease. What's more, the mix of personality and job complexity affected health as much as the combined impact of such key factors as smoking, age, and excess weight. The results upset conventional thinking. Research showing that workers in enriched jobs are generally more satisfied has led some employers to increase the complexity of jobs. The task now is to pinpoint which aspects of job complexity are bad for the heart.

TUNING IN TO SPOKEN WORDS AT LIGHTNING SPEED

For journalists and other professionals, the dreaded chore of listening to recorded interviews and lectures may soon be less tedious. SpeechSkimmer, a device designed by Barry Arons at Massachusetts Institute of Technology's Media Lab, speeds up a tape without changing the speaker's voice to a chipmunk's and scans it for highlights.

Running on a Macintosh computer connected to a small touchpad controller, the system digitizes and splits a tape into 60-millisecond segments that are delivered sequentially to alternate ears of a headphone. By partially overlapping those segments and by eliminating or reducing pauses, the system allows listeners to zoom through a tape at twice the normal speed. Other programs search the tape for long pauses or increases in voice pitch, which often precede important statements or signify the introduction of a new topic. The system plays back the first five seconds after each of these points, giving listeners a good idea of the tape's contents. So far, SpeechSkimmer exists only as a research prototype.

FROM THE USDA, A HIGHER SURVIVAL RATE—FOR COCKROACHES?

Science marches on: A U. S. Agriculture Dept. researcher has found a way to breed thousands of cockroaches with minimal time and effort. The key is to prevent cockroach cannibalism, which typically kills up to 95% of a brood, says Richard S. Patterson of the USDA Medical & Veterinary Entomology Research Lab in Gainesville, Fla. Some 400 female cockroaches are put in a box with a fine-mesh screen at one end. Their nymph offspring can get out, but the killer mothers are trapped inside. Since the nymphs are all the same age, they don't eat each other, either.

Roach husbandry isn't as profitable as, say, cattle raising, but it does serve a purpose. USDA researchers use roaches to test insecticides and other roach-control measures. One major roach supplier, Carolina Biological Supply Co. in Burlington, N. C., charges $68.75 for a box of 50.

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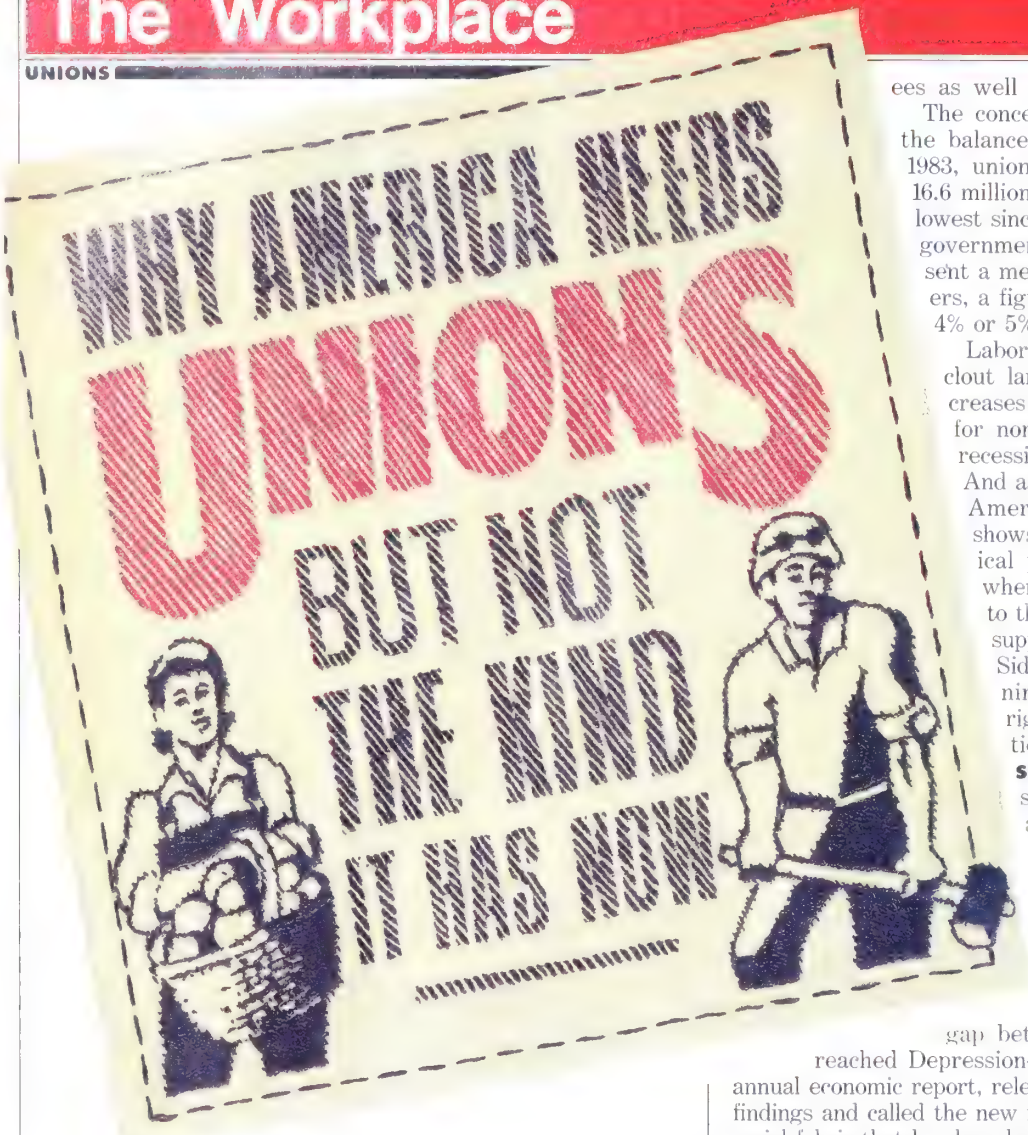
UNIONS



"There are always going to be people who take advantage of workers. Unions even that out, to their credit. We need them to level the field between labor and management. If you didn't have unions, it would be very difficult for even enlightened employers to not take advantage of workers on wages and working conditions, because of [competition from] rivals. I'm among the first to say I believe in unions."

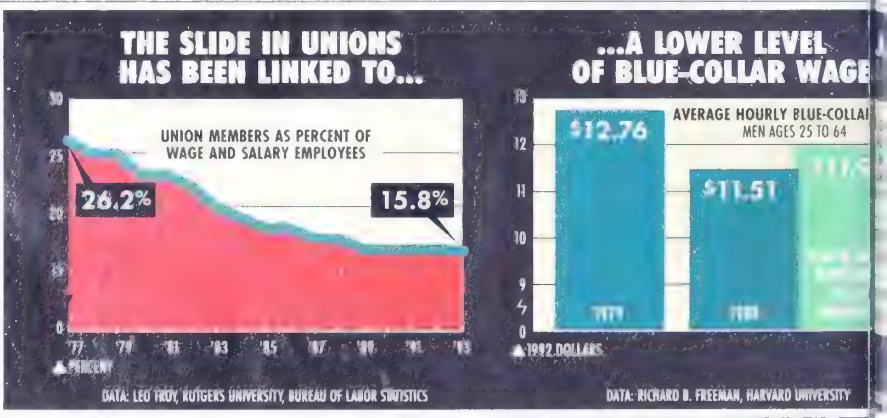
Ted Kennedy spouting tired liberal dogma? Labor Secretary Robert B. Reich pandering to President Clinton's union backers? Nope. The speaker is Senator Orrin G. Hatch (R-Utah), labor's archrival on Capitol Hill for nearly two decades. Don't misunderstand: Hatch still opposes organized labor at nearly every turn. But when pressed, even he concedes a point that's of growing concern to economists, Administration officials, and some executives: Free-market economies need healthy unions. They offer "a system of checks and balances," as former Labor Secretary George P. Shultz has put it, by making managers focus on employees as well as on profits and shareholder

The concern of Shultz and others is tha the balance has shifted significantly. Sinc 1983, union membership has fallen 6%, t 16.6 million, or 15.8% of the workforce—th lowest since the Great Depression. Subtrac government employees, and unions repre sent a mere 11% of private-industry worl ers, a figure that by 2000 could plunge t 4% or 5%, some experts say.

Labor's fabled bargaining and politica clout largely has vanished, too. Pay in creases for union members lagged thos for nonunion ones from 1983 until th recession pummeled everyone in 199 And as labor's 1993 defeat on the Nort American Free Trade Agreemer shows, it delivers a lightweight's poli ical punch compared with the day when "Clear it with Sidney" referre to the veto Franklin Delano Rooseve supposedly gave clothing-union leade Sidney Hillman over FDR's 1944 ru ning mate. In short, if Hatch right, the drawbacks of deunioniza tion should be appearing.

SCARY GAP. They are. New re search from respected economist at such schools as Harvard an Princeton shows that blue-colla wages trailed inflation in th 1980s partly because unions rep resented fewer workers (charts The resulting drag on pay fo millions of people accounts fo at least 20% of the widenin gap between rich and poor, which ha reached Depression-era dimensions. The President annual economic report, released earlier this year, cited thes findings and called the new income disparities "a threat to th social fabric that has long bound Americans together." The fu scope of that threat remains to be seen, but the early sign are disturbing: Experts cite weakening unions as a key rea son for the six-percentage-point slide in the 1980s in th share of employees with company pension plans, for the sev en-point decline in those with employer health plans, an for a 125-fold explosion in unlawful-discharge suits now tha fewer employees have a union to stick up for them.

The surprising implication, in fact, is that the U. S. migh be better off, socially and perhaps even economically, with



thier union movement. That could be true especially if the nions of the AFL-CIO follow through on a February report urges labor to become partners with management in sting efficiency. This is an unprecedented endorsement of rnative systems—including self-managed workplace teams—already have fed big efficiency gains at such companies as l, Xerox, and Scott Paper. "If unions help improve produc- with ideas like teams, they can justify higher wages and r existence," says Paul A. Samuelson, the father of neo- sical economics and professor emeritus at Massachusetts In- ute of Technology.

he AFL-CIO's action, in fact, may help legitimize the most ortant development in U. S. labor relations in generations. e and there, traditional adversarial bargain- which evolved 60 years ago in response to derick W. Taylor's "scientific management" nods of dividing work into its simplest tasks, eing replaced by a more flexible, participa- approach as companies flatten hierarchies. ions helped make Taylorism work in the and '40s by institutionalizing its principles" bor contracts, says MIT management profes- Thomas A. Kochan. "We need to [do] that y through cooperative labor mechanisms."

TNERS. Xerox Corp. and its 6,200 U. S. copi- ssemblers, who belong to the Amalgamated hing & Textile Workers Union (ACTWU), are ving that this works. Three tries at team- x since 1982 have fared so well that Xerox is ging 300 jobs from abroad to a new plant in a, N.Y., where it expects higher quality savings of $2 million a year. Xerox gives un- officials internal financial documents and hes them statistics in the same classes man- s take. "I don't want to say we need unions at means the old, adversarial kind," says Xe- CEO Paul A. Allaire. "But if we have a coop- ive model, the union movement will be sus- ed and the industries it's in will be more petitive."

his view is spreading among the few dozen major compa- developing partnerships with labor. "There's definitely a e in American society for unions," says David H. Hoag, f executive of LTV Corp. In 1993, he signed a labor pact the United Steelworkers (USW) that lets the union nom- e a board member in return for backing teams and other iency measures. Declares Ernest J. Savoie, who heads l Motor Co.'s cooperative labor programs: "If unions were isappear, the country would be in serious trouble."

lost employers couldn't agree less. Few American manag- have ever accepted the right of unions to exist, even gh that's guaranteed by the 1935 Wagner Act. Over the dozen years, in fact, U. S. industry has conducted one of the most successful antiunion wars ever, illegally firing thousands of workers for exercising their rights to organize. The chilling effect: Elections to form a union are running at half the 7,000-a-year pace of the 1970s. And major strikes—involving 1,000 or more workers—have fallen from 200-plus a year to 35 in 1993. To ease up now, many executives feel, would be to snatch defeat from the jaws of victory.

Most managements detest unions out of a belief that they impede productivity and raise wage costs. That's partly true. Numerous studies have confirmed that unions reduce profits, especially in such industries as steel and autos, where workers got a healthy share of outsized, oligopolistic earnings in the '50s and '60s. Now that the oligopolies are being undercut by global competition and deregulation, "large employers no longer have oligopoly profits to share with unions," says Samuelson.

Still, unions are often blamed for more trouble than they've caused. In the 1970s, for instance, many executives believed that unions inflated prices by lifting wages above some presumed market level. Since then, however, more than 50 quantitative studies have concluded that the higher productivity of unionized companies offsets most of their higher costs. "It's a misreading of economic analysis to conclude that unions inherently cause inflation or unemployment," says Nobel laureate Gary S. Becker, a conservative economist at the University of Chicago. "Some kind of union behavior is bad, but unions that help workers bargain collectively instead of individually perform a legitimate role that's not counter to social efficiency."

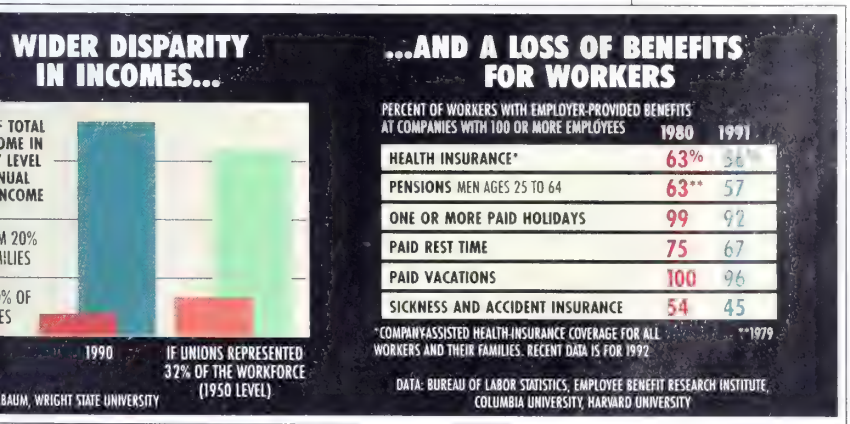
George Shultz, now a fellow at Stanford University's Hoover Institution, goes further. "As a management person, if I don't have a union, I don't want one," he said in a 1991 speech to the National Planning Assn., a labor-management group. "But . . . look at this more broadly. Free societies and free trade unions go together. Societies are missing something important if they do not have an organization in the private sector, such as a trade union movement" that gives workers the clout labor has exerted to help pass safety and pension laws.

FORGET THE TEAMSTER GOONS AND PICKET LINES OF OLD. UNDER THE NEW MODEL, UNIONS RAISE OUTPUT, CUT WASTEFUL WORK PRACTICES, AND HELP THE U.S. STAND UP TO GLOBAL RIVALS

Shultz's notion is taken for granted in most of the industrialized world. True, Europe's recession has set off nasty clashes between unions and companies bent on cost-cutting. Still, say European labor experts, most companies there continue to see unions as social partners, not enemies. What's more, every Western European country except Britain and Ireland has a legally mandated second channel, such as works councils, for advancing worker interests. These groups, usually elected by employees, provide input into many managerial decisions.

The Clinton Administration would make this the model for U. S. labor-management cooperation. A year ago, the Labor and Commerce Depts. appointed a 10-member commission composed primarily of academics. Headed by former Labor Secretary John T. Dunlop, it may ultimately suggest revising the Wagner Act to ease roadblocks to organizing. In return, some commission members want to amend the act to legalize teams in nonunion companies, which risk violating a prohibition against sham unions—groups that workers seem to run but actually are controlled by management.

AFL-CIO President Lane Kirkland will take this trade-off, leaving a divided business community to decide if teams are



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worth the risk of more union organizing. It isn't clear if it will take the chance. But even the National Association of Manufacturers—founder of the Council on a Union-Free Environment—may consider the idea. "Can you fix the management abuses without tilting the field too much back to labor?" asks NAM Industrial Relations Vice-President Randolph M. Hale. "I'm not sure, but I'm open to listening to the arguments."

"THREAT EFFECT." While those issues are thrashed out, the effects of labor's decline pile up. Take inflation-adjusted pay. Historically, it has tracked productivity. But in the 1980s, output per worker jumped 12%, while real wages and benefits for all workers rose only 4%, according to the Bureau of Labor Statistics. Falling unionism was a major factor, several studies have found. Private-sector union workers on average earn 39% more in pay and benefits than nonunionized ones, according to the BLS. And as unions shrank, a rising share of workers had to settle for lower-paying nonunion jobs.

That particularly hurt the least educated. For instance, deunionization accounts for one-third of the 15% decline in real earnings of white male high school dropouts between 1979 and 1988, according to a 1991 study led by McKinley L. Blackburn of the University of South Carolina. Weaker unions account for half the 10% pay slump of black male high school grads in that period and two-thirds of the 3% decline for white female dropouts. And the study didn't measure smaller pay hikes nonunion workers got as the threat of unions subsided. "We ignored the threat effect, which would make the impact bigger," says Blackburn.

These figures portray the partial dismantling of the middle class. By pushing up blue-collar pay, unions helped narrow the gap between rich and poor after World War II. But now the trend has reversed. In 1988, white-collar men aged 25 to 64 earned 48% more than blue-collar men of the same age, up from 35% more in 1979, according to a 1991 study by Harvard University economist Richard B. Freeman. Nearly half the increase reflected falling unionization, Freeman found. And for all men aged 25 to 64, including service workers, deunionization caused at least 20% of the spike in male wage inequality in the '80s. Freeman's findings have been confirmed by recent studies by Princeton University economist David Card and George J. Borjas of the University of California at San Diego. "It's clear that deunionization had an important impact," says Borjas, a political conservative who's no fan of unions.

Labor's decline has even hurt professionals. Traditionally, companies have pegged white-collar pay hikes to those won by their unionized workers. Nonunion employers did so indirectly, with salary surveys that cover unionized companies. In the '80s, professionals got fatter raises than union members. But they got a bigger share of a smaller pie.

If unions had represented one-third of the workforce in 1990, as they did in 1950, the bottom 80% of families—those earning up to $83,400 a year—would have received 61% of the nation's income, according to a 1993 study by economist Rudy Fichtenbaum at Wright State University in Dayton, Ohio. Instead, they got 56%. "White-collar workers think unions don't matter, but they're not on a separate boat from blue-collar ones," says Research Director Lawrence Mishel of the Economic Policy Institute (EPI), a Washington think tank partly funded by unions.

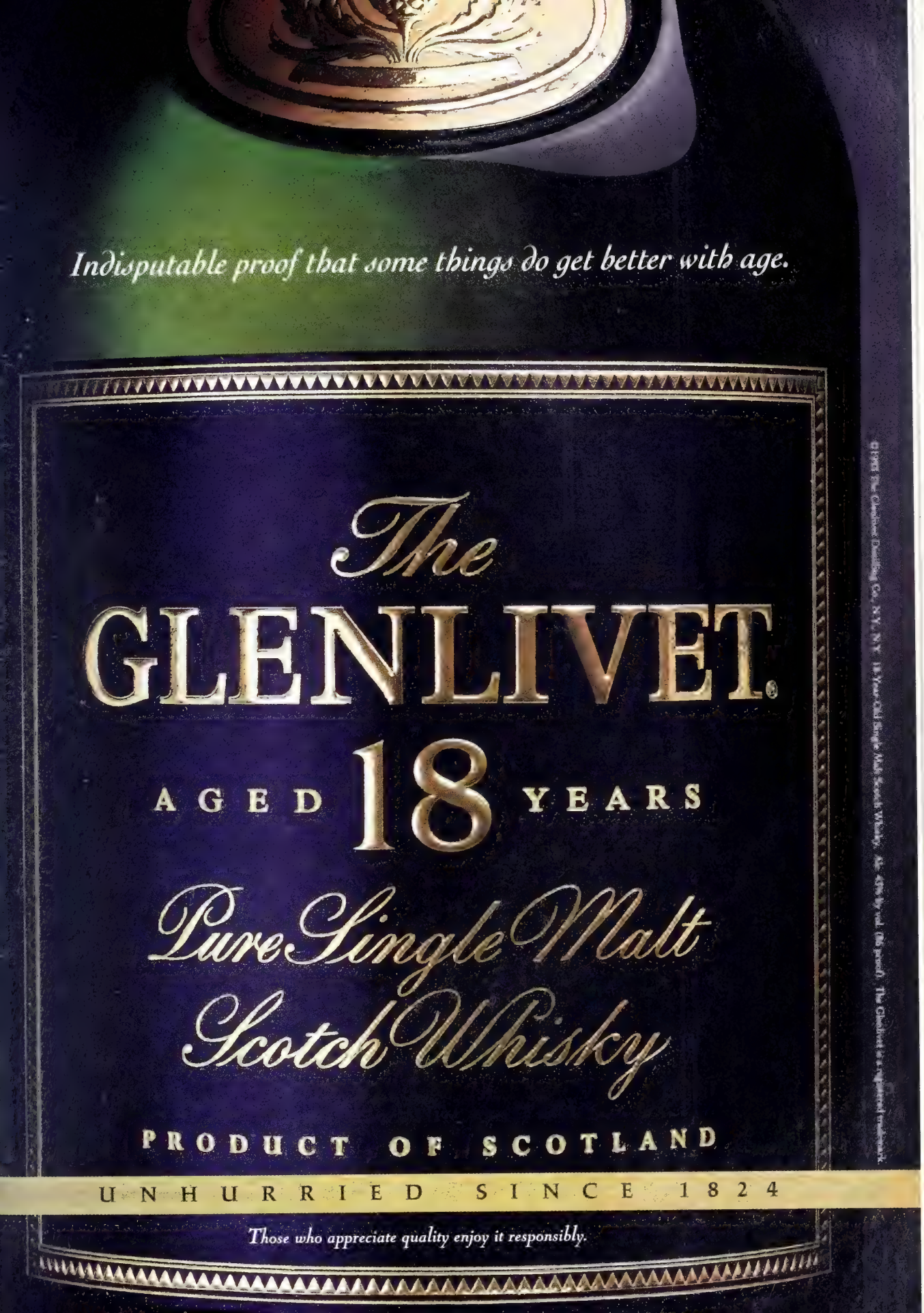
There's no way to tell whether the combined income of all U.S. workers would have been higher had unions not lost ground: No one has yet proved whether unions push up overall income or merely redistribute it. But it's clear who prospered in the '80s. The rent, dividends, and interest that owners of capital earned jumped 65%, according to an EPI analysis of Commerce Dept. figures. Wages and salaries, including white-collar ones, grew only 23%.

FRAYED FRINGES. As wages have gone, so have fringe benefits: Most workers have them largely because of unions, and they're disappearing partly because unions are weaker. Company-paid retirement plans, for instance, caught on after World War II, when federal wage and price controls prompted unions to demand pensions in lieu of pay. To keep unions at bay, nonunion employers followed suit, and pension plans multiplied. The trend reversed as the union threat shrank. The share of workers aged 25 to 64 with an employer-paid pension plan slid 6 points, to 57%, from 1979 to 1988, according to a 1992 study by Freeman and David E. Bloom, a Columbia University economist. "The single biggest reason for the decline," says Freeman—roughly 25%—"is deunionization."

The same goes for health insurance, which also became a standard benefit after unions pushed it during the war. Since 1980, the share of workers under 65 with employer-paid health care has plunged from 63% to 56%, according to the Employee Benefit Research Institute (EBRI), a Washington research group. Rising costs are a factor, but "coverage would not have dropped as much if unions had stayed strong," says EBRI research director William S. Custer.

Similarly, fewer workers now have grievance systems to protect against mistreatment. Forced to fend for themselves, they're filing unjust-dismissal suits, which have exploded from about 200 a year in the late 1970s to more than 25,000 a year now, experts estimate. "There's no question that protec

THANKS TO SUCCESSFUL TEAMWORK, XEROX IS HIRING MORE U.S. WORKERS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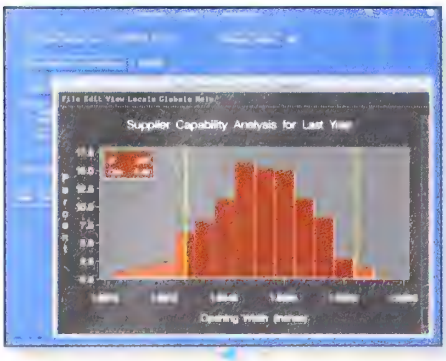

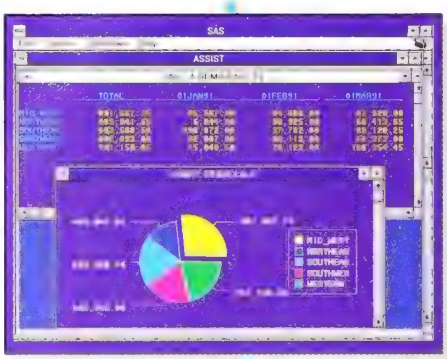

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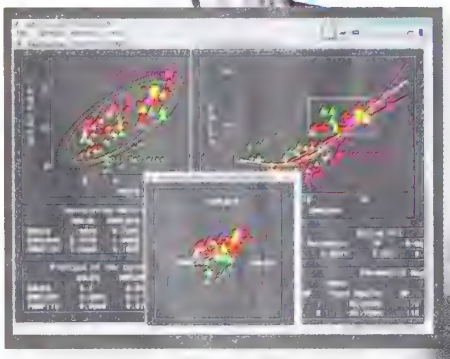

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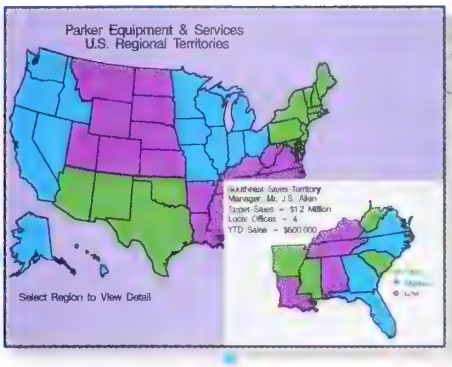

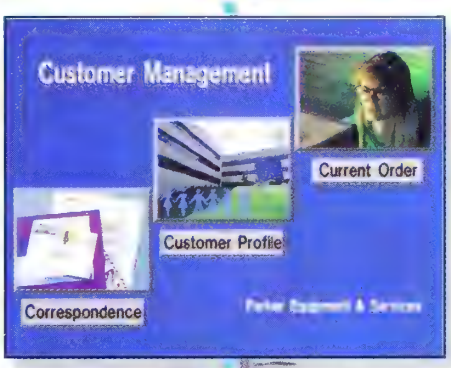

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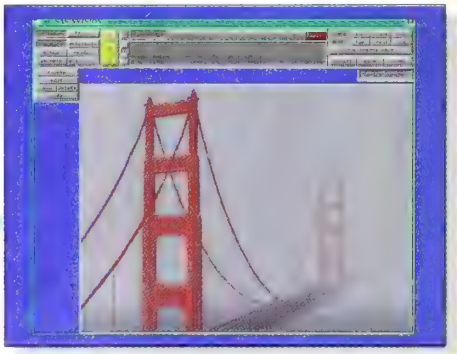

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System

ormation Delivery

tions for workers have gone down with the decline of unions," says Theodore J. St. Antoine, a University of Michigan professor who's an authority on such cases.

Of course, employers don't respond just to unions. They react as well to social trends and market forces, such as the women's movement or competition for skilled workers. For instance, the share of workers in midsize and large companies with unpaid maternity leave—for which unions haven't pushed hard—rose from 33% to 37% between 1988 and 1991, says the BLS. And some benefits, such as pensions and Social Security, have developed their own constituencies.

Unions are the guardians of others, however. Take safety regulations. The Occupational Safety & Health Administration under Reagan and Bush was a hands-off agency—and workdays lost to injuries jumped from 58 per 100 workers in 1983 to 86 in 1991. Now, President Clinton is beefing up the agency, partly because of the support unions gave him. That's typical of interest-group politics, which experts say works best if all major interests in society are represented. Even Senator Hatch agrees: "We need unions to make sure that working people have a legitimate and consistent voice."

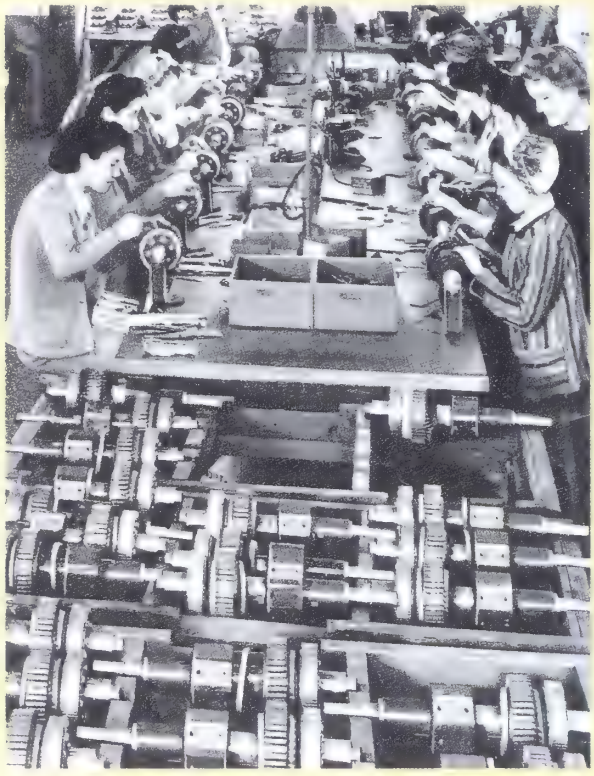
If unions are so important, why are they going the way of T. Rex? Certainly, labor itself hasn't helped. When global competition hit, most unions dismissed employers' demands for change as the same old handwringing by fat-cat bosses. And as their ranks thinned, unions were slow to tackle the costly and iffy job of aggressively organizing new industries.

In fact, the 1980s spotlighted the lackluster leadership that has plagued unions for years. They never developed an antidote to union-fighting tactics. And they found no rejoinder when President Reagan labeled labor's millions of middle-class constituents a special-interest group. The dour, cerebral Kirkland instead found soulmates among Reaganites who shared his hatred of communism. His failure to devise a domestic strategy left labor rudderless at its most crucial moment in half a century.

Still, even a brilliant leader would have struggled. The shift from factories to services spurred new jobs in industries that traditionally have been hard to unionize. The effects were compounded by industry's antiunion fervor in the face of global competition. Other industrialized countries have shifted to services, yet their unions haven't collapsed, Harvard's Freeman says. The difference, he adds, is the extraordinary opposition of U. S. managers.

For instance, employers illegally fired 1 of every 36 union supporters during organizing drives in the late 1980s, vs. 1 in 110 in the late '70s and 1 in 209 in the late '60s, according to an analysis of National Labor Relations Board figures by University of Chicago professors Robert J. LaLonde and Bernard D. Meltzer. Unlawful firings occurred in one-third of all representation elections in the late '80s, vs. 8% in the late '60s, they found. "Even more significant than the numbers is the perception of risk among workers, who think they'll be fired in an organizing campaign," says Harvard law professor Paul C. Weiler. Indeed, when managements obey the law, they don't defeat unions nearly as often. Union membership in the public sector, where federal, state, and local officials don't try so desperately to break or avoid unions, has risen by 23% since 1983, to 7 million last year.

The excuse on which industry based its assault—that U. S. labor costs were out of line internationally—was largely a bogus issue: Such comparisons sprang mostly from the ultrastrong dollar. Now that it's lower again, U. S. wages are below Europe's and Japan's.



TAYLORISM SPURRED ADVERSARIAL BARGAINING—BUT BOTH ARE PASSÉ

BLUNDERBUSSES. Companies had a point, though, on productivity. Across the economy, it rose only 1% a year in the '70s and '80s, down from 3% in the '50s and '60s, meaning that it failed to offset wage growth. Bad management was a major culprit. But labor blundered, too: It contracts made it hard for unionized employers to cut costs as quickly as nonunion companies when global competition undercut the pricing power of U. S. industry. As a result, the premium union members earn over nonunion workers rose from 10% to 15% in the 1960s, economists have found, to about 21% today. That's partly why corporate animosity toward unions continued even as annual factory productivity growth returned to 3% in the '80s and union pay lagged behind inflation.

This attitude may change only if labor embraces cooperation with unprecedented enthusiasm. Doing so will require unions to reinvent themselves as extensively as executives are reinventing the corporation. The unions of tomorrow will need to balance better wages with efforts to help employers win competitive battles. And in place of adversarial skills, labor leaders will need expertise in everything from management techniques to technology.

More fundamentally, unions will need to adopt a "we're in this-together" mentality instead of the "us-vs.-them" one that has characterized both sides of the industrial divide for decades. "We want a whole new approach to how labor and industry can work together," says Lynn Williams, a leading advocate of labor cooperation who retired in March as USW president. Such views received an important boost from the AFL-CIO's remarkably self-critical February report, titled *The New American Workplace: A Labor Perspective.* It declared

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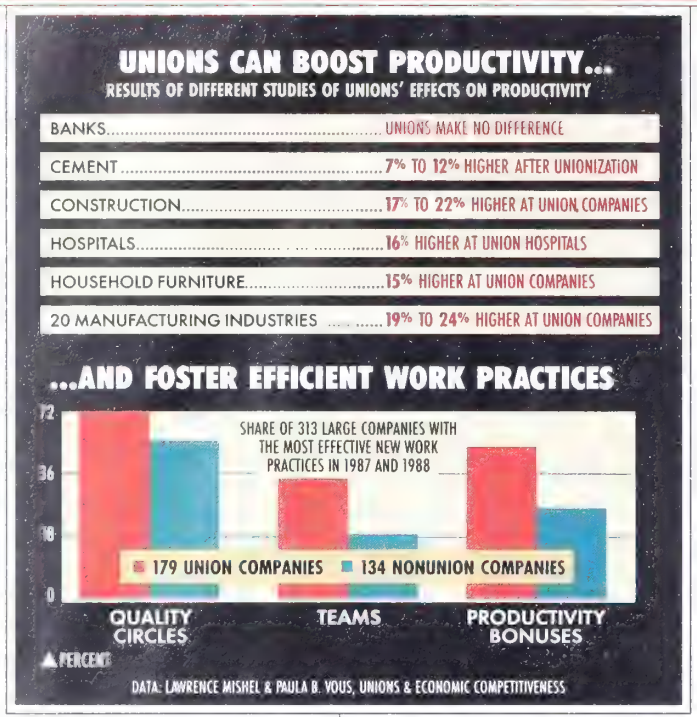
that new cooperative work methods "increase worker opportunities . . . bring greater democracy to the workplace . . . and improve the quality, and reduce the cost, of the goods and services."

This attitude already has begun to filter into industries as diverse as farm equipment, autos, electrical equipment, garments, mining, paper, steel, and telecommunications. Companies such as Deere, AT&T, and National Steel are creating completely new roles for both managers and union officials, who collaborate daily on everything from work assignments to marketing strategies. One early example of this new unionism is General Motors Corp.'s Saturn Corp., where teams of workers largely govern themselves and union officials are involved at every level of management.



PAPER COPIER. Another is Scott Paper Co., which four years ago took a startlingly different tack than the frontal assault International Paper Co. had mounted on the United Paperworkers Union in an effort to cut costs. Scott and the union formed a committee of 10 top officials from each side who pledged to "work together to meet the needs of employees, customers, shareholders, the union, and the community." They set up teams that give workers more decision-making power, a move so successful in reducing costs and boosting quality that other paper companies, such as Champion International Corp., are copying it. "The union can play a key role in our business," says Philip E. Lippincott, who retired as Scott's chief executive officer on Apr. 1.

It isn't easy for unions to make the transition. The days of sitdown strikes and company goons stamped generations of labor leaders with a profound suspicion of management. And recent antiunion battles exacerbated this. For instance, the United Auto Workers (UAW) advocated cooperation in 1973 at GM. But a dissident group sprang up to resist in the '80s, when GM shut some plants that didn't accept teams. And some unions fear that managers use teams to abolish hard-won work rules or dupe employees into working harder for no extra pay. Beyond that, some experiments in cooperation have left a bitter taste: An early-1980s effort between AT&T Co. and the Communications Workers of America (CWA) failed when lower-level officials weren't included and AT&T cut jobs.

Perhaps the hardest question for unions to deal with is why they're necessary for a high-performance workplace. What really makes empowerment succeed, after all, isn't unions per se, but employee trust and commitment. Teams lift productivity most in companies with four features, according to a 1990 review of two dozen studies by University of California at Berkeley economist David I. Levine and Laura D'Andrea Tyson, who now heads the Council of Economic Advisers. These include pro ductivity bonuses, job secu ity, steps to build group co hesiveness (such as limitin pay differences betwee workers and managers), an employee rights (such as pro tection from arbitrary fi ings). "A union is one wa to do [all] that," says Levin "although it's [not] the onl way."

FUTURISTS. Still, employer that pull all this off, such a Motorola Inc. and Procter Gamble Co., have forma mechanisms that protect em ployees much as unions do These include no-layoff pra tices, grievance procedure and profit sharing. Moreove unions can be very helpfu when they're willing. In fac surveys by the General A counting Office show that a ternative work schemes ar spreading at least as rapidl in unionized companies as in nonunion ones.

National Steel Corp., for example, began cooperation tw years after Japan's NKK Corp. bought 70% of the No. 4 U. steelmaker in 1986. To build trust, the company adopted a n layoff policy for all 9,500 union members with a year's senio ity. Hourly workers act as foremen. And USW officers g data on everything from earnings to market conditions—t help them see what it takes to compete. The payoff: Despit recent operational problems that have hurt profits, the nur ber of hours needed to make a ton of steel at National main plant in Ecorse, Mich., has fallen by 33% since 1988, t 2.95—among the industry's best numbers. National has run ad proclaiming: "We're partners with labor because we can't in agine a future without them."

> FROM THE 1960s TO THE 1980s, MANAGEMENT REALLY SEIZED THE DAY: ILLEGAL FIRINGS OF UNION BACKERS DURING ORGANIZING DRIVES ROSE FIVEFOLD

Even AT&T and the CWA are starting over. I December, 1992, they set up elaborate joi structures, such as councils of company and u ion officials at the local, regional, and nation level. Now those are paying off. For instanc AT&T's long-distance unit wanted to evalua technicians in Virginia for traits that make em ployees good at customer relations. Technicia feared that those who did poorly might b moved or fired. But instead of fighting the e fort, the CWA won a guarantee of no forced la offs or relocations. The profiling has helped speed up AT&T's maintenance times, officia say, and now is being expanded to 1,600 techn cians nationwide. "If we had tried to do that a sent the union's involvement, we wouldn't hav gotten as much cooperation from our techn cians," says Stan Kabala, the unit's head.

The lesson: If organized labor can offer itse as a partner, it may win at least grudging a ceptance and carve out a place in the glob economy. If not, its slow fade will continu And many employees, union and nonunion alik will suffer, whether they know it or not.

By Aaron Bernstein in New York, with b reau reports

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REPUBLICANS

IS THE GOP OUT FRONT ON SOCIAL REFORM?

A new breed of governors tries to show that less can be better

In Washington, Republicans are finding a hundred ways to say "no" to activist government. But in Massachusetts, it's a different story. GOP Governor William F. Weld is touting social reforms that stress deregulation, privatization, and cost controls. And his tack, which promotes less-but-better government, plays well with voters. "A self-professed libertarian is the most popular politician in the most Democratic state in the country," moans James S. Braude, executive director of the Tax Equity Alliance for Massachusetts and a Weld critic.

Weld's penchant for "entrepreneurial government" puts him in a small club of maverick GOP governors. From South Carolina to Wisconsin, these New Republicans are overhauling education, health care, welfare, and job training. They believe government can work if it's based on choice, market incentives, and partnerships with business. And as the national GOP gropes for a new vote-getting agenda, these beyond-the-Beltway Republicans could be laying the groundwork for the party's 1996 platform. Says Senator Phil Gramm (R-Tex.), a likely Presidential contender: "The states are the only places where ideas are being put to work."

In South Carolina, Governor Carroll A. Campbell Jr. has relaxed curriculum and budget rules for schools that meet performance standards. In Ohio, Governor George V. Voinovich wants to give real estate tax breaks to companies that clean up contaminated sites in inner cities and open businesses there. And Michigan Governor John M. Engler is granting some freedom over teacher hiring and curriculum to community groups that start "charter schools" to compete with existing public schools.

Some critics see the innovations as simply budget cuts in disguise. But to David Osborne, guru of the "reinventing government" movement, these pragmatic Republicans have latched on to a winning strategy. "They believe in government and believe in using it," says Osborne, who has advised state leaders of both parties. "It's an emerging tendency with the Republican Party that is clearly ascendant with the voters."

History may be repeating itself. A decade ago, moderate Democrats formed the Democratic Leadership Council to come up with centrist alternatives t traditional liberalism. Among the DLC founders was Arkansas Governor Bi Clinton. GOP governors are now lookin for the same middle ground, rejectin the Reagan era's antigovernment bias

BLURRY LINES. Both political parties ar trying to come up with new policies tha don't lend themselves to ideological l bels, says Will Marshall, president the DLC's Progressive Policy Institut "The lines are getting blurred," he add "Statehouse reformers are movin against the old bureaucratic structures

Among the innovations:

Wisconsin's Tommy G. Thompson ha overhauled welfare to reduce chron cases. To spur parents to keep kids i school, he has cut benefits of familie with truants by up to 48%. And he ha cracked down on parents who aren keeping up with child support. Since th reforms began in 1987, the welfare cas load has dropped by 18%. In Januar Thompson will embark on even mor radical reform: In a two-county exper ment, welfare recipients will have t work for benefits, which will end afte two years. Medicaid and child care wi continue an extra year. To encourag dual-parent families, the state also wi pay benefits to married couples, if th father agrees to job training.

In mid-March, Michigan's Engler wo a referendum that abolished local prope ty taxes as the source of school fundin Instead, the state will finance educatio with a hike in the sales tax from 4% t 6%—a broad-based levy that will he equalize disparities between rich an poor districts. One hitch: A future rece

HOW REPUBLICAN PRAGMATISTS TACKLE SOCIAL PROBLEMS

MASSACHUSETTS

William Weld

Job training: Began a "consumer-driven" system of apprenticeship and school programs keyed to employers' needs

MICHIGAN

John Engler

Education: Will use sales tax, not property taxes, to finance schools and equalize spending in poor and wealthy districts

SOUTH CAROLINA MOTHERS GET SHOPPING DISCOUNTS IF THEY VISIT THE DOCTOR

OHIO

George Voinovich

Children: Boosted Head Start and initiated one-stop shopping for child care and other family-service programs

SOUTH CAROLINA

Carroll Campbell

Infant care: Persuaded businesses to offer discounts to pregnant women who get medical checkups

WISCONSIN

Tommy Thompson

Welfare: Makes welfare mothers work and ends benefits after two years; has cut benefits to families with truant kids

would dent school coffers, forcing tate to look for other revenues.
uth Carolina's Campbell and Blue s/Blue Shield bypasses bureaucrats a program he claims has helped e the state's high infant-mortality by 12% since 1988. Under the plan, bell jawboned businesses into offer- pregnant women and mothers of children coupon books with $1,000 of discounts for diapers, vitamins, ther goods and services. The hook: women must get the coupons vali- by a doctor. This has fostered prenatal care and infant checkups. eld is turning Massachusetts' frag- ed job-training programs into a one- shopping system. Peter T. Koch, tive director of MASSJOBS Council, dvisory board, says the system is mer-driven." It works with com- s such as Martin Marietta Corp. train manufacturing workers. And orking with the biotech sector to 120 secondary and community-col- students as lab technicians. Before, tate rarely consulted with business. med with studies that show pre- l education saves welfare costs the road, Ohio's Voinovich has ed contributions to the federal Start program fivefold since 1990- $97 million now. Ohio is first in ation in Head Start spending. Voi- h also gave grants to 13 counties xperiments to make their family- ce programs more businesslike.

CRUEL? These governors are win- favor because "they have tried to de an image that is not status quo," GOP pollster William D. McInturff. critics charge that Thompson's wel- programs are cruel. Voinovich and er have been lambasted for drop- thousands of unemployed men from ole. Weld's conversion of Medicaid a managed-care program has pted complaints that the poor are health care. And most programs n't been in place long enough to e they will work in the long term. ere's also skepticism that state in- tions can translate into a powerful nal message. Political analyst Kevin illips says Republicans will capture Presidency only with solid plans for conomy, taxes, and abortion.

publican governors argue that with ocrats controlling both the White e and Congress, fresh GOP leader- must come from the states. "No- else has the bully pulpit," says bell. "We're in a position to offer natives on many fronts." And what Republicans are serving up looks ive as well as conservative.

Susan B. Garland in Washington, David Greising in Atlanta and Rich- A. Melcher in Chicago

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CABLE TELEVISION

ESPN WANTS TO REINVENT THE COUCH POTATO

It's trying everything from multimedia services to video games

Talk about getting in your face. On Apr. 6, ESPN2 talk-show host Jim Rome introduced New Orleans Saints freshman quarterback Jim Everett as "Chris Evert." And he kept twitting the gridder, calling him by the former tennis ace's name, until Everett pushed over a table and sacked Rome. The all-sports channel cut to a station break.

The scuffle provoked a week's worth of barroom banter. And while both Rome and Everett later apologized, the episode spotlighted ESPN's irreverent sibling. Steven M. Bornstein, ESPN's chief executive, described the incident as "regrettable." But what buzz!

And buzz is what Bornstein needs as he moves to make ESPN more than just a sports channel. The Capital Cities/ABC Inc. unit now owns such events as golf's Skins Game, the College Football Awards Show, and the two-year-old Espy Awards for athletes. It's about to unveil a proprietary line of sports-action video games from Sony Corp. The ESPN Radio Network provides sports news to 260 stations. The core cable-TV channel just launched an on-line multimedia sports-info feature on Prodigy. And on May 9, ESPN bought Creative Sports Inc., a big-league sports-marketing and TV-production company in Charlotte, N.C. Says Bornstein: "The opportunities were always there. We're just now beginning to take advantage of them."

Bornstein's goal? He would like to put the ESPN name on the whole shebang in sports. The onetime TV cameraman for baseball's Milwaukee Brewers wants to control sports information the way the New York Yankees dominated the American League in the 1950s. And ESPN's near-universal brand recognition is like having Mantle batting cleanup.

How much can sports fans digest, though? Critics say ESPN2, launched last September, is merely a grab bag of ESPN castoffs. "I question the need for another sports channel," says Larry Blasius, a top media buyer at Foote, Cone & Belding Communications Inc. Bornstein, a University of Wisconsin film graduate who joined fledgling ESPN in 1980 as director of programming, scoffs at such remarks: "Those were the same allegations and charges when we launched ESPN 14 years ago."

Bornstein, 42, may be on the right track in trying to expand his franchise. "I don't think he's stretching it too thin," says David A. Klatell, professor of broadcast journalism at Boston University. "If Disney can do it, ESPN can do it. It also may be a preemptive strike to get ahead of competitors."

ESPN, based in Bristol, Conn., doesn't lack rivals. Golf legend Arnold Palmer is behind the Golf Channel that teed off on May 1. The Baseball Network is on deck for a July debut. And starting later this year, the Classic Sports Network will woo nostalgia buffs with historic footage. Perhaps the biggest threat comes from the merger of two rival webs into Prime SportsChannel Networks. The deep-pocketed challeng backed by cable heavyweights John Malone, Bill Daniels, and Charles F. I lan, now offers NewSport Television, all-sports channel of talk and news. I in 7 million homes, roughly half ESPN2's penetration.

Bornstein's most ambitious play ca for attracting a new generation of spo fanatics for emerging, as well as esta lished, sports. For example, Bornste is planning what he calls the Extrem Games for 1995. The spectacle will fe ture such events as bungee jumping, line skating, and mountain biking.

DIRT SKIING. Creating new events a starting new products cost money, nat (although Bornstein won't discuss nu bers), and success is no lock. ESPN h slipped before, losing an estimated $ million per year from 1990 to 1993 on baseball contract. Why? Baseball's a ing—and shrinking—fan base doesn't e actly thrill advertisers these days.

While Bornstein's deal with Maj League Baseball sweeter this ye he is looking ESPN2 to bring younger viewe On the sibling cha nel, you'll find su hip fare as lacross dirt skiing, and o law soapbox de bies. With its liber use of comedy a rock, ESPN2 look sounds, and fe like MTV. The cha nel will soon ha its own magazi tie-in with a r habbed, all-spor *Dirt*, the thus-f underachieving k brother of gamine teen-zine *Sassy*.

Wall Street seems to like Bornstei moves. Jessica Reif, media analyst f Oppenheimer & Co., estimates that ES will report $900 million in revenue a $192 million in operating profit in 199 up 16% and 32%, respectively, from la year. "It's a huge moneymaker," R says. ESPN2 has yet to turn a profit. 14 million homes are a far cry fro ESPN's 63 million. Mark A. Riely, an a alyst at brokerage MacDonald Grip Riely Inc., predicts the channel will be 20 million homes by yearend.

At an ESPN2 party last fall, Bornste told the crowd, "The future is not ju ESPN2, but ESPN3, ESPN4, and ESPN That would be getting in his riva faces big-time. And think of the buzz.

By Chris Roush in Bristol, Con

SWINGING FOR THE BLEACHERS

Steven Bornstein's growth plans for ESPN include:

- Expand ESPN2 from 14 million homes to ESPN's 63 million
- Buy more sporting events
- Roll out a line of video games
- Upgrade on-line, multimedia service on Prodigy
- Introduce *ESPN2/Dirt* magazine

DATA: BUSINESS WEEK

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GUNS

REMINGTON FACES A MISFIRING SQUAD

Accidents with the Model 700 rifle are laying it open to heavy damages

On Dec. 29, 1989, Glenn V Collins was ready for a day deer and wild-boar hunting Eagle Pass, Tex. But while he was u loading his rifle after running into ba weather, it accidentally discharge wounding him in the foot. That afte noon, the 53-year-old Amoco Cor drilling supervisor had to have his fo amputated.

Collins claimed that the gun, Rer ington Arms Co.'s Model 700 bolt-actio rifle, had gone off without his eve touching the trigger. And on May 7, h persuaded a Texas jury it had: After six-week trial, Remington was ordere to pay Collins $17 million—$15 millio of it in punitive damages. "I think wh the jury was telling Remington and a gun manufacturers is that if you have defective or unsafe product, you'd bett do something about it," says Collins.

The Wilmington (Del.) gunmake hasn't decided whether to appeal th verdict. But company spokesman Willia Wohl says Remington flatly denies th the Model 700—one of the top-sellin hunting rifles in the U. S.—is faulty any way. "We have believed in the pa and continue to believe today that th Model 700 is one of the finest bolt-actio rifles manufactured," says Wohl. "W see the product as a safe and reliab sporting firearm."

STORMY OUTLOOK. Remington maintain that the accidents stem from users' mi takes, not from product defects—a d fense it used in the Collins' case. "Whe a gun goes off, the first thing peop say is: 'It's not my fault,'" argues Ke neth Soucy, who is in charge of researc and development at Remington. "Us ally, we find that people have bee messing around with the fire contro They get in there and screw things up

Remington has done pretty well wi that argument, winning 8 out of 12 jur trials since 1981. In a further 18 know suits settled since 1981, Remington h negotiated modest payouts—some as litt as $5,000, say plaintiff lawyers. But th Collins case is the first time a jury sa internal Remington documents alleged showing that the company had develope a safer design yet chose not to market "The documents established that Re ington has had a design for at least dozen years that eliminates the heart the problem," says Richard C. Miller, lawyer in Springfield, Mo., who repr sents Collins and 17 other plaintiffs past and present suits against Remingto involving its Model 700. "This impli that they knew something was wro with the existing fire-control system."

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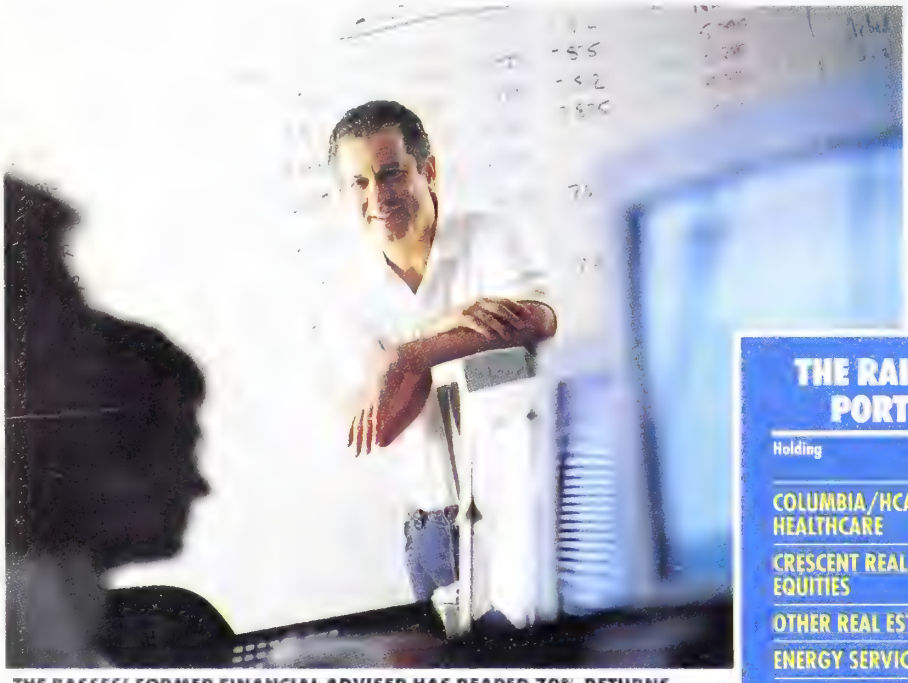
DEALMAKERS

IN RAINWATER THEY TRUST

Investors are betting his touch extends to real estate



THE BASSES' FORMER FINANCIAL ADVISER HAS REAPED 70% RETURNS

The day after wrapping up a successful initial public offering for his real estate investment trust, Richard Rainwater is decidedly laid back. Clad in white polo shirt, blue jeans, and tennis shoes, an unshaven Rainwater strolls into his Fort Worth office half an hour late for an interview. The dealmaker explains that he had taken his parents fishing. "The weather's been so crummy here that whenever there are two days of sunshine in a row, you have to take advantage of it," he says.

If anyone knows the importance of seizing the moment, it's Rainwater, the former chief investment adviser to Fort Worth's oil-rich Bass brothers. Rainwater's knack for knowing when to buy and sell big stakes in such companies as Walt Disney Co. and Texaco Inc. helped the Bass empire grow from $50 million in 1972 to more than $5 billion by 1986, when he struck out on his own. While Rainwater's track record still is awe-inspiring—he is worth nearly $800 million and has no personal debt—he now is venturing into particularly risky territory. "I view real estate as the most intriguing opportunity that I've seen in my business lifetime," he says.

The question is whether Rainwater's golden touch will extend to an area where even experts often founder. Through Crescent Real Estate Equities Inc., his new REIT, Rainwater raised $350 million in an IPO two weeks ago. Crescent, which went public at $25 a share and now trades at $26¼, didn't have to slash its asking price to get the deal done in a dicey market. Rainwater wants to take Crescent—which has five office buildings, one retail complex, and interests in three single-family residential land developments—from its current $600 million market value to at least $5 billion in the next decade.

To get there, he will buy distressed properties, primarily in the Southwest. "Essentially, [Crescent] is a blind pool and Rainwater is saying, 'Trust me, I'm Richard Rainwater. I'm going to do great things with your money,'" says Fred Carr of Penobscot Group Inc., a Boston real estate research firm. In contrast, most REITs go public with their portfolios already full.

PLENTY OF GEMS. The Rainwater approach to investing is straightforward. Identify a business that's out of favor, apply shrewd financing techniques, hire talented managers to run it, and wait for the market rebound. But real estate, while hardly booming, is not flat on its back, either, so Rainwater won't be buying at bottom-of-the-market prices.

Rainwater admits he's a few years late but argues there still are plenty of gems out there. He says between $500 billion and $700 billion in mortgages on high-quality properties will be coming due over the next five to ten years, and mortgagees will be eager to unload them. Rainwater figures he will exhaust an initial $300 million credit line within a year and return to the equity market for additional financing. The IPO didn't leave Crescent with a lot of cash. Most of the money was used to repay debt on the properties that Rainwater placed in the REIT in exchange for shares. He owns 5 million shares, including 1.4 million he himself purchased in the offering.

Real estate pros salute Crescent's existing portfolio, whose trophy property is the office-retail complex next to Dallas' Crescent Court Hotel. But Rainwater's real estate acumen remains untested. He has experience but usually not as the lead investor. Says one big REIT investor: "We didn't buy it for what's in the portfolio. We bought it because it's Richard Rainwater."

In the past, that has proven to be enough. Since leaving the Basses, Rainwater has racked up returns in excess of 70% a year. "He wasn't an entertainment specialist when he invested in W

THE RAINWATER PORTFOLIO

Holding	Estimated value Millions
COLUMBIA/HCA HEALTHCARE	$320
CRESCENT REAL ESTATE EQUITIES	140
OTHER REAL ESTATE	30
ENERGY SERVICES	62
OTHER ENERGY INVESTMENTS	10
H.B. KORENVAES INVESTMENTS	55
MID OCEAN REINSURANCE	23
UNITED GAMING	4
OTHER INVESTMENTS, BONDS & CASH	150
TOTAL	$794

and made a killing, and he a health-care specialist when he outstanding job with Columbia al Corp.]," says Samuel S. Moore, esident of Goldman, Sachs & Co.'s division. While surrounding him-th experts in his chosen invest-reas, Rainwater's value is in his "to look several years into the and see trends that others don't ays Moore.

water, 49, has done just that for han two decades. The Stanford ent two years at Goldman before in 1970 to work for the Basses. mid-1980s, Rainwater had sealed his reputation as a financial mastermind. Not every deal he made for himself was a home run, or even a single. But the flops have been small, mostly in the $1 million to $3 million range.

One of Rainwater's recent ventures, a foray into gaming, isn't looking like a smart bet lately. Last year, Rainwater's Kirkland-Fort Worth Investment Partners invested $5 million in United Gaming LP Inc., a provider of slot machines. United Gaming, at 6½, is down 45% from its 52-week high. Rainwater never paid top dollar: He bought restricted stock and warrants for about $3 a share. And he won't become a major player. That's because he owns 10% of the Texas Rangers. Major League Baseball bars owners from active involvement in gaming.

Rainwater is also hot on the potential for economic development in China. He recently put $10 million into a partnership called Richina, which just purchased two publications in China. But although the Asian prospects are alluring, Rainwater's major focus these days is scoring with Crescent. And for good reason: His reputation and a huge chunk of change are on the line.

By Stephanie Anderson Forest in Fort Worth, with bureau reports

Y FIRMS

PUBLIC'S ODD COUPLE TS A QUICKIE DIVORCE

nd Safra's distaste for risk led to a split with Peter Cohen

as an unlikely partner-—Peter A. Cohen, the -profile former chairman earson Lehman Hutton nd Edmond J. Safra, the y-shy, risk-phobic billion-nker. When Safra named gtime friend in '92 to set mbitious new venture on reet, Republic New York ies Corp., industry insid-ubted the partnership last. They were right. In -fire series of events over st few days, Cohen was d of authority over the nd a dozen of his key were fired. So it was no e when Cohen announced n departure on May 10.

COHEN (LEFT) AND LLOYD: ONE'S OUT, ONE'S DOWN

HEDGE. It was a case of fabled caution winning er friendship. Insiders at ic say the Lebanese-born er had become increas-kittish about world mar-nd about Republic's new s a financier for hedge funds, are private investment partner-hat engage in a wide range of nents, many of them highly lever-According to a source at Republic, n had no problem loans to hedge n the first quarter, when curren-es pummeled the funds, and the rned a profit for the first time in But that didn't matter to Safra—ated out.

ording to Cohen, Safra was un-by the unexpectedly rapid growth of the securities unit—whose balance sheet exploded from $1.9 billion to $2.8 billion in just the past three months, largely from loans to hedge funds. In mid-April, Safra decided to reduce the firm's activities in hedge-fund financing and emphasize instead the traditional Safra domain: banker and broker to the ultrarich. Says Cohen: "When that happened, I decided to take myself out of the loop."

Both Cohen and Republic maintain that the divorce is amicable. Cohen is an old friend of Republic President Jeffrey C. Keil, and Keil says their friendship is untarnished by the split. In a joint announcement, Cohen and Republic said Cohen will resign as chairman of Republic Securities and vice-chairman of the parent company. Cohen will form a new investment-management and securities firm in which Republic will be a minority investor, and he will remain a consultant to the bank.

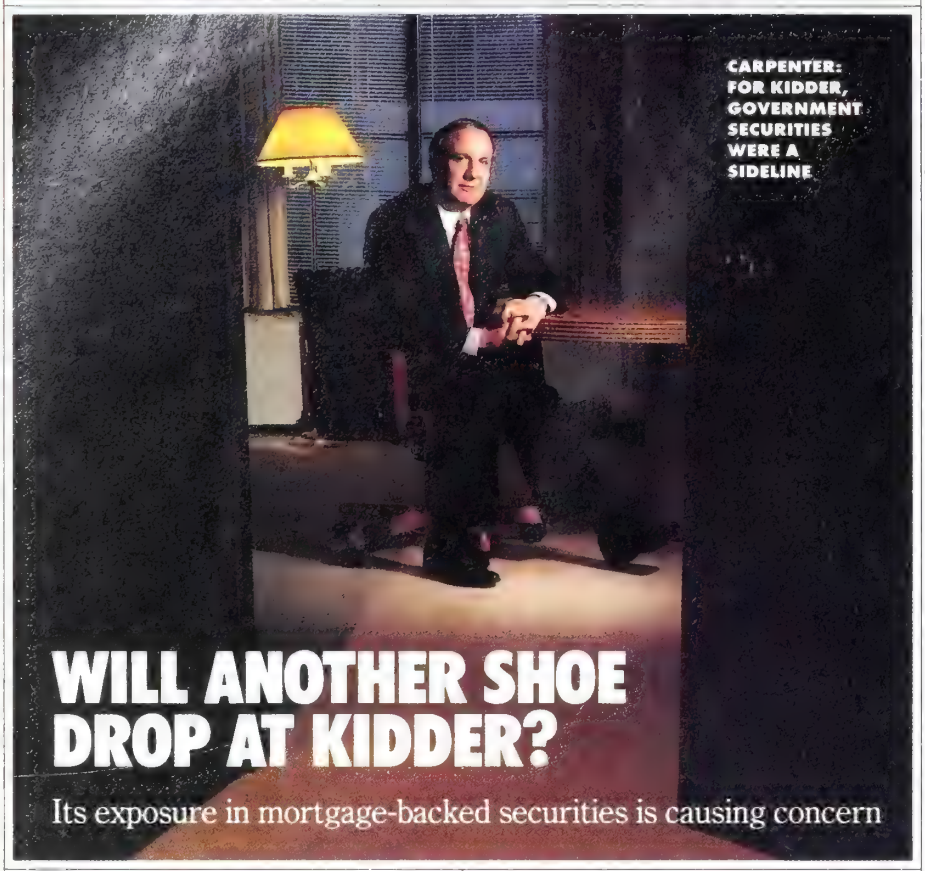
BRUTAL. But despite the bonhomie, Cohen's departure was clearly caused by the all-but-unbridgeable cultural gap between Cohen's crew of Wall Streeters and Safra's inner circle of conservative bankers. Indeed, Cohen's departure capped a series of events that was, by Safra's courtly standards, brutal. On Apr. 27, Republic CEO and President Louis B. Lloyd was ousted as CEO. (He remains president.) The new CEO is E. Daniel Morris, a member of the parent company's board of directors. Unlike Lloyd, who reported directly to Cohen, Morris reports to the board of directors of the securities firm. Thus, Cohen was removed from direct control of the firm. Morris promptly fired a dozen staffers, including Cohen's top aide, on May 2.

Cohen wouldn't discuss his severance or the amount Republic will invest in Cohen's investment firm. The firm will include Palladin Group, an investment unit specializing in arbitrage that is already offered to Republic clients.

That's a far cry from the ambitious vision Cohen had for Republic New York Securities. As Cohen tells it, the bank's Wall Street venture was a victim of its own success. "Obviously, we wanted to continue to grow the business. But the decision was made not to, and we had to live with it," Cohen says flatly. But the firm was also a victim of the nervousness of Republic's enigmatic overlord. Perhaps Cohen might have made a success of Republic Securities after all. But the possibility of failure is what haunted Safra. And in the final analysis, he would have no part of it.

By Gary Weiss in New York

SECURITY FIRMS



CARPENTER: FOR KIDDER, GOVERNMENT SECURITIES WERE A SIDELINE

WILL ANOTHER SHOE DROP AT KIDDER?

Its exposure in mortgage-backed securities is causing concern

Even several weeks after the event, Wall Streeters are still trying to fathom it: How was Joseph Jett, an obscure government-bond trader at Kidder, Peabody & Co., able to rack up $350 million in phony profits over a three-year period before the firm found out about it?

Now, Street speculation is shifting to another part of Kidder: its huge mortgage-backed securities business. The question is whether Kidder sustained large losses during the recent abrupt collapse in bond prices, which battered the mortgage-backed portfolios of many other Street firms. Kidder is so big in this market, says Herman Sandler, principal at Sandler O'Neill & Partners, "because they are willing to assume bigger risks. Other people aren't prepared to take that high a risk profile."

"ALWAYS CHECKING." A senior Kidder executive denies this speculation. "We haven't had any big hits because we operate on a hedged basis for the most part," he says. The executive adds that this assessment is based on an outside firm's complete pricing review of Kidder's fixed-income portfolio for Kidder, Kidder's parent General Electric Co., and government regulators. "We are highly confident," the executive says, "that the [prices] are accurate."

While Kidder is only a minor player in government securities, it is thought to have the largest mortgage-backed portfolio on Wall Street. From January to early May, 1994, Kidder issued $28 billion in mortgage-backed securities, for a commanding 24% market share (table). While Kidder won't say how much of its end-of-1993 $72 billion balance sheet consisted of mortgage-backed paper, rivals say it is a significant portion. Much of Kidder's $439 million in 1993 operating earnings is thought to have come from its mortgage business.

Kidder's success is due in large part to 32-year-old Michael W. Vranos, head of the firm's mortgage-backed department. Vranos, who is rumored to have drawn a bonus north of $10 million last year, is widely respected throughout the close-knit mortgage-backed industr

A source close to General Electri though, tells BUSINESS WEEK that in th past there has been great concern Kidder about the firm's huge exposu in mortgage-backed securities. "That w being watched by everybody inside ar out," says this former GE insider. Kidd Chief Executive Michael A. Carpent "was always checking."

In trying to judge the riskiness Kidder's mortgage-backed portfolio, key issue is how much of it consists high-risk mortgage derivatives, such inverse floaters and interest-only secu ities, whose value can fluctuate radical with a big move in interest rates. Seve al customers of Kidder's, such as Ask Capital Management and Piper Jaffr Inc., have been badly whipsawed by t impact of rising rates on the value their mortgage derivatives. Since Kidd is thought to be such a big owner these securities, the rate rise is believ to have sparked losses of its own.

JUMPING SHIP. Fueling speculation is t recent departure of Kidder's No. 2 mo gage pro, Mitchell Samberg, who left co-head Donaldson, Lufkin & Jenret Securities Corp.'s collateralized mo gage-obligation department. Another parture was Dmitry Shklyar, who ju joined CS First Boston as a mortgag backed-derivatives trader. These loss are "a bearish sign," says one competit because for the past five years, comp ing firms have had little luck luri away Kidder mortgage traders. Sa berg and Shklyar declined comment.

Despite Kidder's statement that it not take any major hits and that bond portfolio is accurately priced, mo gage-backed traders remain skeptic The big interest-rate hike has made very difficult to estimate prices for CM and CMO derivatives, which are oft very illiquid. Kidder's mortgage-back portfolio is thought to be worth fr $10 billion to $15 billion, and Stre sources speculate that if it reflected c rent values, losses could be several h dred million dollars.

Any portfolio losses would be in dition to the $210 million write-off ste ming from the Jett trades. Kidder's nancial viability, though, won't impaired. GE, says Perrin H. Long J research director at First of Michig Corp., will stand behind the firm. might, he adds, "have to pump mon in." While the precise cost, if any, bail Kidder out may never be disclos GE's investment in Wall Street co turn out to be quite expensive.

By Leah Nathans Spiro, with Suzan Woolley in New York and Tim Smart New Haven

LEADING THE MORTGAGE-BACKED PACK

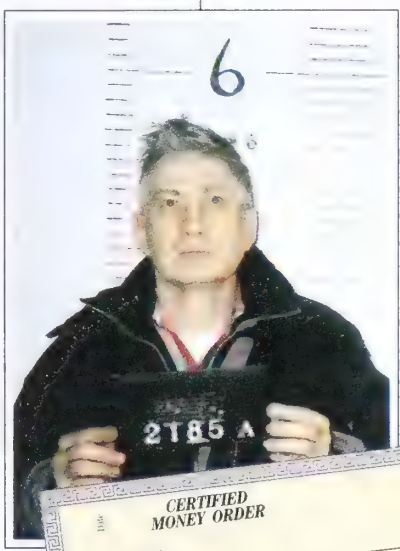
Manager	1993 Billions	1994 year to date* Billions
KIDDER PEABODY	$81.02	$28.16
LEHMAN BROS.	39.93	11.85
BEAR STEARNS	37.80	11.65

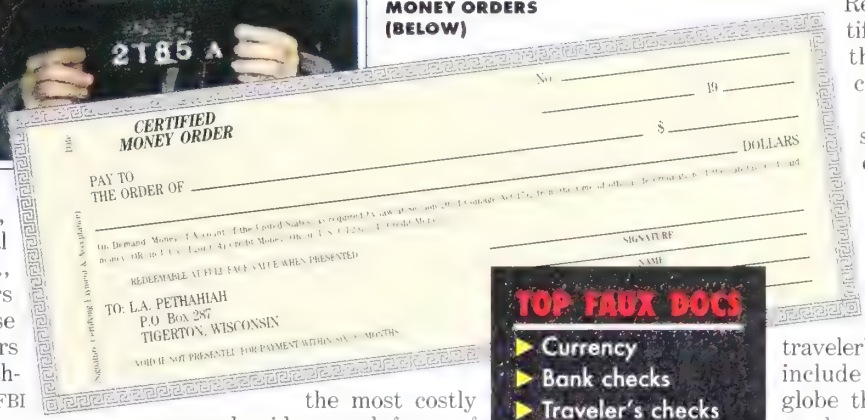
*period ending 5/9/94 DATA SECURITIES DATA CO

E (FUNNY) MONEY SUPPLY SOARING

erfeiting is on the rise, as a result of today's PCs and printers

t first glance, the Family Farm Preservation, based in Tigerton, Wis., seems like just another fringe group. Members of the lieve paper money is worthless e the Federal Reserve, which is- rrency, is illegal. However, the taking its beliefs one step fur- eonard A. Peth, believed by the be the FFP's boasts that he lped launch a gn to circulate feit money or- expose what eves to be the f the current ry system. money orders, ted on photo- machines, real enough unidentified ia lender lost than $30,000 released title cars before de- ng the orders raudulent, ac- to state regu- "It's a real nui- says Jim Purcell, nt of First National in Elberton, Ga., f whose customers nsuccessfully to use rthless money orders e mortgage and oth- payments. The FBI ng into the case.





LEONARD PETH HAS BEEN BEHIND CIRCULATION OF FAKE MONEY ORDERS (BELOW)

DECEPTIVE." Many financial institu- nese days are finding that coun- ng is far more than a nuisance. er it's fraudulent money orders, te checks, traveler's checks, or ecurities posted as collateral for document fraud is on the rise. ing to the Secret Service's Fi- Crimes Div., losses to banks from ases under investigation doubled to $1.4 billion. Agents say much increase is the result of coun- negotiable instruments. And with- next several months, the Treas- ept. is expected to propose a redesign of paper currency to counterfeiters.

The boom in document fraud stems from the ready availability of computers, laser printers, and color copiers. With these machines, even relative novices can produce replicas of currency and other similar instruments that are often just as hard to detect as documents created by skilled counterfeiters. "The instruments being produced now are very deceptive," says Stephen M. Jones, special agent for the Secret Service.

The cost of counterfeiting to the financial-services industry is hard to measure. However, estimates of losses from check fraud alone, by far the most costly and widespread form of document fraud, run as high as $10 billion annually, according to Barbara E. Hurst, president of Hurst Associates Inc., a bank consulting firm in Brookhaven, Pa.

Increasingly, check-fraud rings are targeting corporate business accounts. Once a group has obtained a copy of a corporate check—often by fishing through dumpsters for discarded checks or by stealing them from mail drops—the check is scanned into a computer, where both the amount and the payee can be altered. Using check paper and magnetic ink that is readily available in office-supply and computer stores, rings produce a nearly undetectable forgery. And with government rules requiring most checks to clear in a maximum of five days, money is often withdrawn before a bank or corporation realizes phony checks have been cashed.

The high-tech robbers often operate nationwide. In the past six months, the Secret Service has arrested 30 people tied to a Vietnamese gang in Southern California. All have been indicted. One government investigator says the group counterfeited corporate checks on laser printers and recruited people in at least five states to cash them—costing one large California bank $2 million in losses.

COUNTERMEASURES. Other negotiable instruments, such as stock and bond certificates, are also being forged with growing sophistication. Law-enforcement officials say they are exploring a growing number of cases where loans were issued based on phony securities used to bolster an individual's net worth or as collateral.

Some doctored instruments may not even be counterfeits of legitimate securities. Over the past several months, according to Secret Service Special Agent Gregory J. Regan, several people were arrested after they tried to use counterfeit Japanese bond securities—instruments the Japanese government has said never existed—to obtain a $900 million letter of credit from a U. S. bank. Regan wouldn't indentify the bank because the investigation is continuing.

Banks are now stepping up development of high-tech counterattacks against counterfeiters. In April, American Express Co. introduced a redesign of its traveler's checks, which will include a hologram of a globe that can't be picked up by a photocopy. And nearly two dozen of the nation's largest institutions have signed on to a new system called CheckLink, which tries to detect fake checks before they clear.

TOP FAUX DOCS

- Currency
- Bank checks
- Traveler's checks
- Money orders
- Letters of credit
- Stock and bond certificates

"We are constantly upgrading our fraud barriers," says Lisa Wilhelm of Wells Fargo Bank, whose new system to detect counterfeit check transactions has resulted in six arrests since March. Yet she frets that Wells Fargo and other banks will always be a step behind the crooks. "Every time we put up a barrier," she concedes, "they find another way in."

By Amy Barrett in Washington

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BY GENE G. MARCIAL

IS TIME WARNER DILLER'S NEXT BATTLEFIELD?

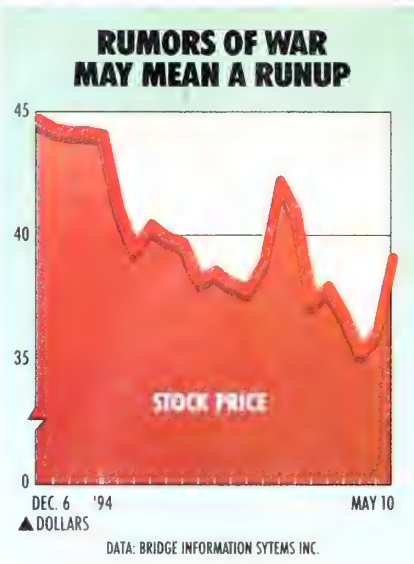
Brace yourself for a new round of rambunctious wheeling and dealing reminiscent of the recent three-way battle for Paramount Communications. Viacom Chairman Sumner M. Redstone won that war, with QVC Chairman and CEO Barry Diller the sorry loser. But these days, rumors on the Street are that Diller has been accumulating Time Warner Inc. shares for a run at the entertainment-and-publishing giant—and that he'll be better organized this time.

"The word is that Barry will soon file a 13D form with the Securities & Exchange Commission disclosing a 5% or more stake in Time Warner," says the head of arbitrage at a New York investment bank. "Diller has come to realize that buying into Time Warner at this point would be a win-win situation—considering Seagram has already acquired a nearly 15% stake." This arb is convinced that Diller will align his group with Seagram President Edgar Bronfman Jr. and others to seek at least a seat on Time Warner's board—to start.

The group Diller galvanized for his failed grab for Paramount is still intact, says the research director at one Wall Street house, who is a friend of Diller. He believes the least Diller will end up with in this new quest is a huge profit on his Time Warner shares.

OUT OF PRINT? Diller believes, according to this pro, that Time Warner will have to make a move more determined than just imposing a poison pill to quell the storm that's beginning to brew. Already, some insiders at Time Warner have for the first time suggested spinning off or selling the publications operations. Such a move is expected to please investors and boost the stock. "At any rate, management will have to make a decisive move to enhance shareholder value," says one big Time Warner investor. To Diller and Bronfman, he adds, that would be a pleasant start toward their ultimate goal—to control the company. Time Warner spokesman Ed Adler says: "It's not true"—that it will sell or spin off the publishing unit. He declined to comment on the Diller rumors. Diller in the past has denied any interest in Time Warner. A QVC spokesman declined comment.

The stock, trading at 44 in December, had dropped as low as 35 by mid-April, partly because of the market's pullback. But since then, it has crept up and is currently at 38. Analysts say Time Warner would be worth 55 in a takeover war.



DON'T FORECLOSE ON COUNTRYWIDE

Just about a year ago, Countrywide Credit Industries Inc. appeared unbeatable. The stock of the huge home-mortgage lender was flying high, climbing fast to 22 from the low teens in 1992. But the stock is now back down to 14. Nervous investors have been bailing out, concerned that rising interest rates will clobber the company. Not everyone agrees, however.

"At this price, an investor is getting the shares at a tremendous bargain," says investment manager Seth M. Glickenhaus. First of all, he says, the company's other business—loan servicing—will emerge stronger, even in a rising-interest-rate environment. And Countrywide is an enticing takeover target, says Glickenhaus.

Countrywide, which reaped huge fees and income from the jump last year in home mortgages and refinancings, has been positioning itself to generate more income from its services. Last year, the company produced $52 billion in home loans and an $85 billion loan-servicing portfolio. The rise in interest rates has beaten down the smaller mortgage banks, resulting in sudden consolidation in the industry.

Glickenhaus says he "wouldn't be surprised" if BankAmerica makes a bid for Countrywide, which earned $1.52 a share in 1993 and $1.94 in the year that ended Feb. 28, 1994. Glickenhaus says Countrywide fits strategically into BankAmerica's growth plans. BankAmerica's Peter Magnani declined comment on Countrywide but says: "We are always looking at opportunities."

Analyst Karel Carnohan of C. Lawrence/Deutsche Bank Securities estimates Countrywide stock could be worth 50 to "a strategic investor takeout party"—based on the company's existing moneymaking business franchise and growth opportunities.

TUNING IN TO EVERGREEN MEDIA

Some Wall Street biggies, including the aggressive hedge-fund manager Lee Cooperman, want to be on radio. What's doing in radio? Some of the best values and potential winners are there, explains Dennis Leibowitz, a veteran media analyst at Donaldson, Lufkin & Jenrette Securities.

Cooperman's Omega Advisors lately acquired an 8% stake in Evergreen Media, the nation's second-largest publicly traded radio-broadcasting company. All but one of Evergreen's 11 stations are in the top 10 American markets.

Evergreen traded as high as 22 last year. But when the stock tumbled to 12, Cooperman increased his stake to 8%. Leibowitz thinks Evergreen "remains the cheapest among the radio station owners, and we rate them very attractive." Evergreen's p-e ratio is 8, while a group of 10 rival broadcast stocks has a multiple of around 11.

Based on this year's estimated broadcast cash flow and the location of its properties, Leibowitz figures Evergreen is worth 30 a share. He sees the stock hitting 22 this year.

The stock's fall from 22 to 12 was due to management's distraction from operations last year when it was in the throes of financings, acquisitions and divestitures, explains media analyst Ed Atorino at Dillon Read, a New York investment outfit. Management's renewed focus on operations and programming improvements in Chicago and Los Angeles should enable cash flow growth to resume this year, he adds, and build long-term value.

horn

attan skyline

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GAMES

SONY HAS SOME VERY SCARY MONSTERS IN THE WORKS

It's leaping into the video game market, and rivals should worry

Video game monsters may soon look and act a lot more menacing. Sony Corp. is set to enter the global video game market with a new machine, dubbed the PlayStation, that offers a startling new generation of 3-D computer graphics. The 32-bit player capitalizes on Sony's knowhow in compact-disk technology and is backed by an army of game developers. Even before it hits the Japanese market with the PlayStation around the Christmas holidays, says Baring Securities Inc. analyst Joseph Osha, "Sony is a frontrunner for the next generation."

Sony's entry comes at a turning point for the $11.3 billion game industry. Until now, Sony has had no leverage over industry kingpins Nintendo and Sega Enterprises Ltd. But many other gamemakers are now moving into compact-disk formats, Sony's strength. It is a powerhouse in every step of the CD food chain, from optical components to CD players to recording stars such as Mariah Carey. With PlayStation, Sony hopes to repeat the formula. "Game technology has risen to a level where we have something unique to add," says Teruhisa Tokunaka, deputy president of Sony Computer Entertainment Inc.

DISK POWER. Sony isn't the first to trumpet dazzling 3-D graphics. Sega, Nintendo, and 3DO have made similar claims for upcoming products. But Sony has pushed the technology the furthest. In one interactive demo, a player can draw a dinosaur out of its lair, walk it through 3-D space, and send it charging in any direction—teeth gritting and gnashing. Sony says that its game player will process images faster than many high-end workstations yet fit into a console that industry experts expect to sell for about $300—less than half the price of the lower tech CD players already out.

Sony's CD prowess helped attract 164 Japanese game companies to produce titles for the PlayStation. For those companies, disks pose fewer risks than cartridges and mean higher margins. Just to get a title on the store shelf, game companies must pay Nintendo and Sega a fortune in license and manufacturing fees. CDs, in contrast, cost just $3 to produce, and Sony has promised to keep the license fee very low.

WHAT MAKES THE PLAYSTATION TICK

- A 32-bit processor plus 20 custom graphic and sound chips
- A double-speed CD-ROM drive
- An army of Japanese software designers
- A $300 price tag

DATA: BUSINESS WEEK

Even so, games for the PlayStation will be pricey. The CDs will cost anywhere from $50 to $100, vs. $40 to $60 for the newest cartridge games. But low production costs mean that prices will come down fast. "Game companies are rushing to Sony because they have fantastic command of CD distribution," says Kazumi Kitaue, general manager of video game pioneer Konami Co. in Tokyo.

Not that Sony will have easy going. It must still help game developers expl the PlayStation's capabilities. Neith Sony nor its licensees have yet produc a finished game. When they do, pla ers may be baffled. Sega has produc similar 3-D effects in the lab but qu tions their appeal to consumers. "W the ability to rotate fighters in 3-D spa make the game more fun?" asks Se designer Toshiya Inoue. "Or just mak more difficult to play?"

MORE HEAT. Sony must also overcom late start. Sega has an installed base 13 million Genesis machines in the U alone. True, its 16-bit technology growing long in the tooth. But as ea as this fall, Sega could launch a n 32-bit machine called Saturn, which drawing rave reviews from softw makers. In late 1995, Nintendo hopes leapfrog its rivals with the 64-bit "P ject Reality," co-developed with S con Graphics Inc.

Matsushita Electric dustrial Co. is also tu ing up the heat with Panasonic CD-based ga player, licensed fr 3DO. After a slow U launch last fall, M sushita shipped 100,0 units to Japanese ret ers in March and Ap In the U. S., the com ny boasts 100 softw titles from 20 differ companies.

Sony says that PlayStation will de with 27 game tit Some 50 more are development. The tial sales goal in Ja is 3 million console 1996, worth at le $90 million.

Sony has given electronic publish subsidiary the ahead to creat new video game vision to mar the PlayStat next year in U. S. The comp also plans to buil CD stamping plan Oregon. With that of commitment, Sony expect to share the U market for next-generation p ers with Sega and others. Barrin huge foul-up, Sony will probably w tall among the video warriors.

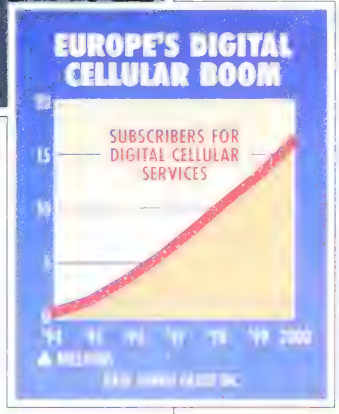
By Neil Gross in Tokyo and Rich Brandt in San Francisco

MUNICATIONS

RELESS RRIERS

uropeans are seizing a juicy lead in mobile technology

l it Europe's revenge. For years, e Continent's high-tech giants—mpanies such as Olivetti, Groupe ilips Electronics, and Siemens-—have stumbled and stalled, sly watching Americans and e dominate computers, chips, and er electronics. But a turnabout g place in wireless telecommuni- In the past two years, mobile nications has become one of the nt's hottest growth industries, a result, Europe is taking the digital wireless technology. "It's o leave the U. S. in the dust," ndrew Sukawaty, head of U S c.'s European digital service. uld happen. While U. S. cellular-ompanies are slowly upgrading tworks to digital and the Feder-munications Commission puts off wave auction that will open up cies for the new, low-cost digital l communications systems (PCS), is going full steam ahead. The upshot: Where technology transfer in telecommunications used to flow from the U. S. to Europe, says Ian A. Craig, president of Northern Telecom Europe, in cellular, "we're finding an exchange in the opposite direction."



ANALOG JAM. The overall U. S. cellular market is still nearly double the size of Europe's—15 million subscribers vs. 8 million. But Europe is racing ahead with second-generation digital systems, largely because cellular-phone companies across the Continent in the mid-1980s agreed on a single cellular standard, called Groupe Speciale Mobile (GSM). In the U. S., cellular operators are still backing differing digital standards. That's stalling the switch to digital, a move that will relieve channel overcrowding in big cities and promises a stronger signal, eliminating breaks in voice calls and glitches in data transmissions.

Another factor slowing digital deployment in the U. S. is the scale of the analog network. It will cost billions to upgrade that huge network to cellular, and operators will have to keep analog customers happy, too. "With our embedded infrastructure, we have to make sure we come up with new systems that are compatible," says Greg Oslan, marketing head of cellular data services for Ameritech Corp.

With a relatively underdeveloped first-generation analog system, Europe can leap ahead to digital more quickly. Europe now boasts 1.8 million digital cellular subscribers, compared with only 100,000 in the U. S. And average annual growth of 133% could boost Europe's market to 16.2 million subscribers by the year 2000, consulting firm Yankee Group Europe says (chart). Because European operators and equipment makers focused on GSM, "Europe is 12 to 18 months ahead of the U. S. in [digital] product availability," says Gail Kirby, an analyst with BIS Strategic Decisions Ltd. in London.

That could be enough to give GSM a lead around the world. Nearly a decade after the GSM standard was blessed by Europe's telephone companies, Europe has a digital system stretching from Italy to Norway and from Paris to Budapest. Today, you can roam with a GSM phone across systems in most big urban areas. By 1996, the phone companies promise, seamless roving across less populated regions will be possible. Meanwhile, more than 70 countries, covering a combined population of nearly one billion in Europe, Asia, and the Middle East, have adopted GSM.

That is creating a windfall for European equipment makers. Sweden's L. M. Ericsson has emerged as the world's leading maker of cellular transmission equipment. Nokia, based in Finland, just signed a contract for a GSM network in Beijing that will provide coverage for most of the city's 7 million inhabitants.

U. S. manufacturers are betting on a global GSM market, too. "It's clear where you are going to invest your R&D money today," says Sukawaty, who is managing director of Mercury One-2-One, a British wireless joint venture between U S West and Cable & Wireless PLC. And, even though there's no demand for such

products in its home market, Motorola Corp. is a leading supplier of GSM handsets.

Digital cellular isn't the only place where Europeans are pulling ahead. Mercury One-2-One launched the world's first personal communications service in Britain last September. PCS is a hot new technology that uses low-powered cells and inexpensive phones that can double as cordless home models. One-2-One's service has undercut GSM calling costs by as much as 50%.

FREE-FOR-ALL. A second PCS system, called Orange, backed by Hong Kong's Hutchison Whampoa Ltd., started in Britain in April. A German consortium called E-Plus Mobilfunk, including Thyssen, Veba, BellSouth, and Vodafone, will begin service in Berlin, Leipzig, and Halle on May 27, with a $4.8 billion system expected to be completed in 1997. The consortium says it will be the largest PCS network in the world; it expects 3.3 million customers by 2000.

Back in the U. S., more than 100 companies are waiting to bid in the FCC's spectrum auction for licenses to develop PCS services. The first auctions may not be held until late this year, though, and industry insiders don't expect widespread PCS deployment in the U. S. for another two to three years.

Europe's fast start in PCS and its explosive growth in digital cellular have a lot to do with the freewheeling competition in wireless markets. In Britain, the third and fourth national GSM cellular networks started up in the past nine months. Industry leader Cellnet, 60% owned by British Telecommunications PLC, gained 110,000 more subscribers in this year's first quarter, double the number it gained in the same period of 1993.

> More than 70 countries have adopted Europe's cellular standard

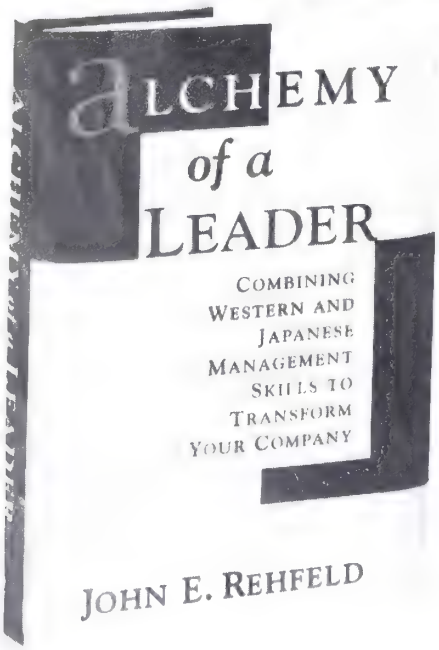
Competition is also likely to accelerate growth in Italy, already a hot market. Last month, after four years of bidding and negotiating, the government awarded a second license to a consortium headed by Olivetti that includes Bell Atlantic, Pacific Telesis Group, and Mannesmann. It was worth the effort: Salomon Brothers Inc. expects the license to bring in $2.6 billion in revenues o the next six years. Among trendy I ians, a cellular phone has become an sential fashion accessory.

REGULATORY ROLE MODEL. The Europ cellular industry, deregulated in the l 1980s, is now a role model for Euro regulated businesses. The Europe Union recommended on Apr. 27 that remaining exclusive mobile licenses eliminated by 1998. EU Industry C missioner Martin Bangemann also ommended allowing mobile operators build their own lines to connect cell stations with land-based telephone works, avoiding hefty leasing fees f state-owned carriers. Such changes not be legislated anytime soon, but t signal a sea change in attitudes am regulators.

To be sure, U. S. operators and s pliers aren't sidelined. Equipment m ers are now following in the steps the Baby Bells, which have long b active in European cellular mark through a series of partnerships. when it comes to digital cellular, Yanks now find themselves in the n position of looking for the newest t nology in the Old World.

By Gail Edmondson in P

PROFIT BY THE BEST FROM EAST AND WEST!



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Ag Armeno 1

Ag ARMENO Mines & Minerals

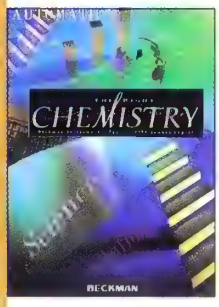
Ag Armeno Mines & Minerals Inc. is a Canadian Based junior mining company. Awarded as Sogem's 1992 "Quality Service Supplier of the Year" for the silver/lead/zinc/gold concentrate being produced at the San Bartolome mine, Ag Armeno is constantly looking to be a leader in the mining industry in South America. With solid fundamentals and several additional mineral deposits under exploration and /or development, Ag Armeno is building into an evergrowing junior producer.

NASDAQ: AROYF

AMP Incorporated 2

13% compound annual growth rate since 1956. 12% of sales spent in RD&E. Record $3.45 billion sales, $2.83 EPS in 1993. Good growth expected in 1994. Sales were up all but 4 of 52 years - with 80% of sales electronics-oriented and 60% of sales products applied by AMP tools and machines. Broad Diversification: Leading producer of electrical/electronic equipment and tens of thousands of customers who install the equipment. Subsidiaries in 35 countries. Strong worldwide capabilities.(NYSE-AMP).

Beckman Instruments, Inc. 3

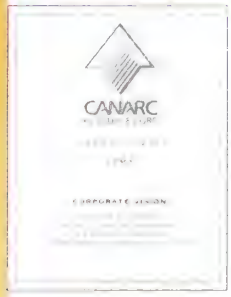


Beckman's business is focused on the chemistry of life. The company designs, manufactures, sells and services biological laboratory systems. A market leader, Beckman helps advance scientific discovery and enhance medical care in every corner of the globe.

Canadian National 4

Provides rail-based transportation and distribution services throughout Canada and the USA. As CN North America, operates a seamless rail freight service, HaliFax to Vancouver, and south into Chicago, connecting to other rail carriers. Susidiaries manage property assets, the CN Tower in Toronto, develop oil & gas holdings, and market consulting and technology transfer services worldwide.

Canarc Resource Corp. 5

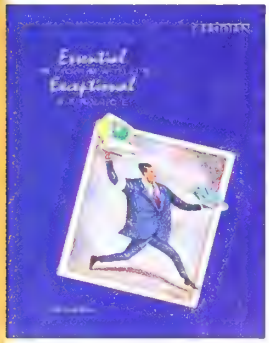


Canarc Resource Corp. is a growth-oriented, international gold exploration company with more than 20 gold exploration projects in North, Central and South America. Our corporate goal is to maximize shareholder returns through extraordinary asset growth by finding and developing world class gold deposits.

Central & South West Corp. 6

Central and South West Corporation is a public utility holding company, which owns four electric operating subsidiaries that provide electric service to more than four million people in Texas, Oklahoma, Louisiana and Arkansas.
Other major subsidiaries include an intrastate natural gas transmission company and a non-utility power production company. CSW has increased its common stock dividend for 43 consecutive years

Coridian 7

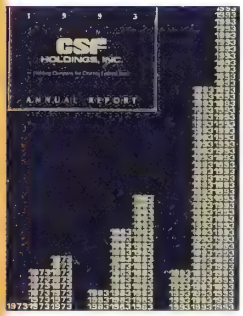


Coridian is an information services and defense electronics company whose objectives are to 1) improve operating margins and profitability through technology investments and greater operating efficiencies, and 2) pursue opportunities for growth, both internally and through strategic acquisitions. Coridian has $1.34 billion in net operating loss carryforwards currently available to offset U.S. earnings. Coridian's 1993 annual report I looks at three trends changing its businesses' markets—outsourcing, target marketing and retrofitting—and how its employer services, media research and defense electronics businesses, respectively, are positioned to take advantage of these opportunities.

Clearly Canadian 8

Clearly Canadian Beverage Corporation (NASDAQ: CLCDF) produces ans markets a Clearly Canadian™, a line of natural flavoured sparkling water beverages. The award-winning products consistently capture a majority share in the New Age Beverage segment. Through new alliances and new product introductions, the Company continues to broaden market penetration in domestic and international markets.

CSF Holdings, Inc. 9



CSF Holdings, Inc. (principal subsidiary is Citizens Federal Bank) achieved earnings for 1993 which were the second highest for any year in the forty-two year history of the Company. The Company achieved a 1.05% return on average assets and a 21.53% return on average stockholders' equity, and has a strong capital position.

CSF HOLDINGS, INC.

Datapoint 10

Founded in 1968 in San Antonio, Texas, Datapoint Corporation is an established international leader in computer-based communications, including: integrated call center management and networked videoconferencing and information processing.

The Company traded under the symbol "DPT" on the New York Stock Exchange, has headquarters in San Antonio and Paris, France, and employs 1,500 people worldwide. Datapoint's broad and varied customer base represents approximately 40,000 installed systems for more than 200 types of business, industrial, and government organizations.

Datapoint markets its products and services in 49 countries wordwide.

olding 11

holding

CS Holding is a global financial services group dedicated to providing its clients with greater value. Building on the strengths of our group companies, we have been able to combine our worldwide capabilities to offer our clients a single source for all their financial transactions. The greater value we provide is mani- in our collective breadth of experience, range of products and es, asset base and global scope. Most important, it is demon- ed in our absolute commitment to our clients.

eport-McMoRan Inc. 12

Freeport-McMoRan, a natural resource leader, has dramatically increased its reserve base. The Company is one of the world's largest and lowest cost producers of gold and copper. Its Grasberg ore body contains the largest single gold reserve and the third largest open-pit copper reserve of any mine in the world. The Company's phosphate fertilizer joint-venture is the world's largest integrated and one of the lowest cost producers of phosphate fertilizers. (NYSE:FTX)

ersoll-Rand 13

Ingersoll-Rand is one of the most experienced and trusted suppliers of machinery, equipment and services to the worldwide manufacturing, assembly, process, construction and mining industries. Ingersoll-Rand and its subsidiaries, which include Torrington bearings and Schlage locks, and its joint ventures, which include Dresser-Rand and Ingersoll-Dresser Pumps, participate in virtually every industrial activity in the world where our products add value to our customers' end products and processes.

l 14

Intel is the world's largest semiconductor manufacturer and principal supplier of microprocessors to the "new computer industry" - an industry in which many key products are all built around the PC architecture standard.

Intel supports the computing industry's needs for strategic products that provide performance, mobility, connectivity and personal conferencing. The company does this through investing heavily in internal design, manufacturing and development capabilities, while driving the evolution of new generations of high-performance products.

Lyondell Petrochemical Company 15

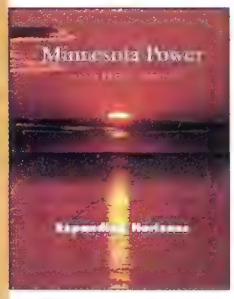
Lyondell Petrochemical Company

One of the largest and most efficient petrochemical producers and refiners in the U.S., with 1993 revenues of $3.8 billion. The refinery venture with CITGO completed last year provides for a major refinery upgrade and alredy has begun to stabilize refining cash flows. Lyondell's low cost postion in petrochemicals should provide for a strong earnings improvement as business conditions improve. Four-year annualized return to stockholders has been 11%, with a $0.90 per share annual dividend. (NYSE:LYO)

Methanex 16

Methanex is the world leader in producing and marketing methanol. Methanex has eight production facilities laocated in Canada, New Zealand, the United States and Chile, and sources additional production from the United States, Europe and Trinidad. Methanex is well positioned to take advantage of the positive outlook for the methanol industry.

Minnesota Power 17



Headquartered in Duluth, Minnesota Power (MP) operates utilites and related companies in six states. Its electric utility serves northeastern Minnesota. Water utilities serve Florida and the Carolinas. Related businesses include coal mining, paper manufacturing and recycling. MP reports 24 years of consecutive dividend increases, and 10-year average total shareholders return of 17%.

Nordson 18

Nordson Corporation is a world leader in systems that apply adhesives, sealants and coatings to consumer and industrial products during manufacturing operations. Since 1986, sales and earnings per share have grown at average rates of 15 percent and 18 percent, respectively. For 1993, return on shareholders' equity was 23 percent. Since 1986, return on shareholders' equity has averaged 26 percent.

Nine West 19

Nine West is a leading designer, developer and marketer of fashionable women's footwear distributed to more than 2,000 department, specialty and independent stores and through 306 of its own retail and outlet stores. The Company's nationally recognized brands include Enzo Angiolini, Nine West, Nine West Spa, Calico, 9&Co., and Westies. In 1993 Nine West's revenues grew 19.6%, gross profit increased 20.7%, operating income rose 19.2% and net income advanced 55.2%.

Norfolk Southern Corporation 20

Norfolk Southern Corporation, "The Thoroughbred of Transportation," is a Virginia-based holding company that owns all the common stock of and controls a freight railroad, Norfolk Southern Railway Company, and a motor carrier, North American Van Lines, Inc. The corporation's 1993 net income exceeded $594 million.

Precision Standard Inc. 21

PRECISION STANDARD INC.

Precision Standard is a diversified company engaged in the maintenance, modification and cargo conversion of aircraft for military and commercial customers, the provision of aircraft support services, the design and manufacture of aircraft cargo handling systems, the manufacture of aerial target systems and the development and manufacture of rocket launch vehicles and guidance systems.

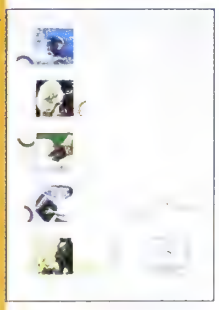
Repap Enterprises Inc. 22

Repap is an integrated North American forest products company with assets of Cdn $3.4 billion. Average annual revenue growth has exceeded 18% over the past ten years. Repap produces coated paper, northern softwood kraft pulp, lumber and kraft paper, and holds the patents to the revolutionary and environmentally-friendly ALCELL® pulping technology.

Roberts Pharmaceuticals 23

Roberts Pharmaceuticals (NASDAQ: RPCX) is fast realizing its goal of becoming a major pharmaceutical company whose diverse products contribute to the health and well-being of all age groups. Roberts has successfully combined an aggressive product development program with strategic acquisitions, to create a profitable company with a well-balanced product portfolio concentrated in six major therapeutic categories.

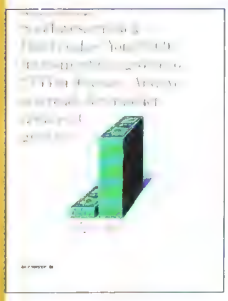
Solvay Group 24



Solvay is a chemical and pharmaceutical Group with sales of USD 8 billion worldwide.

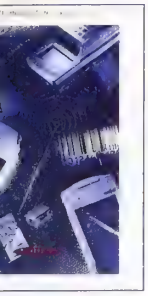
The strategy followed by Solvay is to be a world leader in its five sectors – alkalis, peroxygens, plastics, processing and health, white improving the quality of its products through continuous and cost-effective innovation

Southwestern Bell Corporation 25



Southwestern Bell Corporation (NYSE:SBC) provides telephone, cellular, cable TV and advertising services and products to customers worldwide. SBC also holds an interest in Telmex, the Mexican telephone company. Based in San Antonio, Texas, SBC ranks 32nd on the 1993 Forbes list of the largest U.S. companies.

bol Technologies 26



Symbol Technologies, Inc. (NYSE:SBL) is the world leader in bar code-based data transaction systems. The restructuring and consolidation of Symbol in 1993 mirrors the increasing integration of the Company's three core technologies — bar code laser scanning, portable computing and wireless data communications networks.

Telia Group 27

telia

The Telia Group offers public and private networks for telephony, communications and mobile telephony. Together with PTT rlands and Swiss PTT, Telia is a co-owner of Unisource. In , The Telia Group's revenues totalled USD 4.5 billion. n on capital employed was 14.5%. Telia invested a total D 910 million.

s Corporation 28

Telus Corporation is a Canadian telecommunications and information services company managing assets over $3 billion. Revenues in 1993 were $1.26 billion Cdn, up 6.3%. Telus subsidiaries provide fully digital wired and wireless telecommunication services, and electronic publishing. Joint ventures include information systems management and joint telephony/cable tv operations.

las Corporation 29

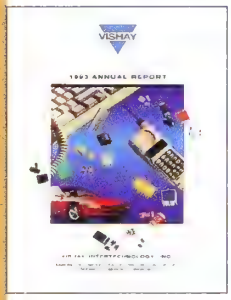
A leading diversified manufacturer of proprietary products for commercial, industrial and consumer niche markets, recorded Another Record Year in 1993. During the year, TriMas continued the successful execution of its proven strategies for growth and achieved record sales, earnings and cash flow and, most importantly, record shareholder returns.

Send for our Annual Report to learn why we believe 1994 will be Another Record Year.

United American Healthcare Corporation 30

United American Healthcare Corporation provides innovative managed care services to public and private health care clients. Through individual case management, continuing provider and utilization review and related controls the corporation provides for delivery of all aspects of quality healthcare services.

Vishay 31



Vishay (VSH) is a leading U.S. and European producer of a wide range of passive electronic components including resistors, capacitors, sensors, and inductors. The Company has approximately 14,200 employees and 53 manufacturing facilities in the U.S., Mexico, Europe, Israel and the Far East. 1993 Sales: $856m, +29%; 1993 Net Earnings: $44m, +45%.

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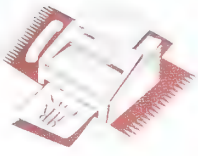

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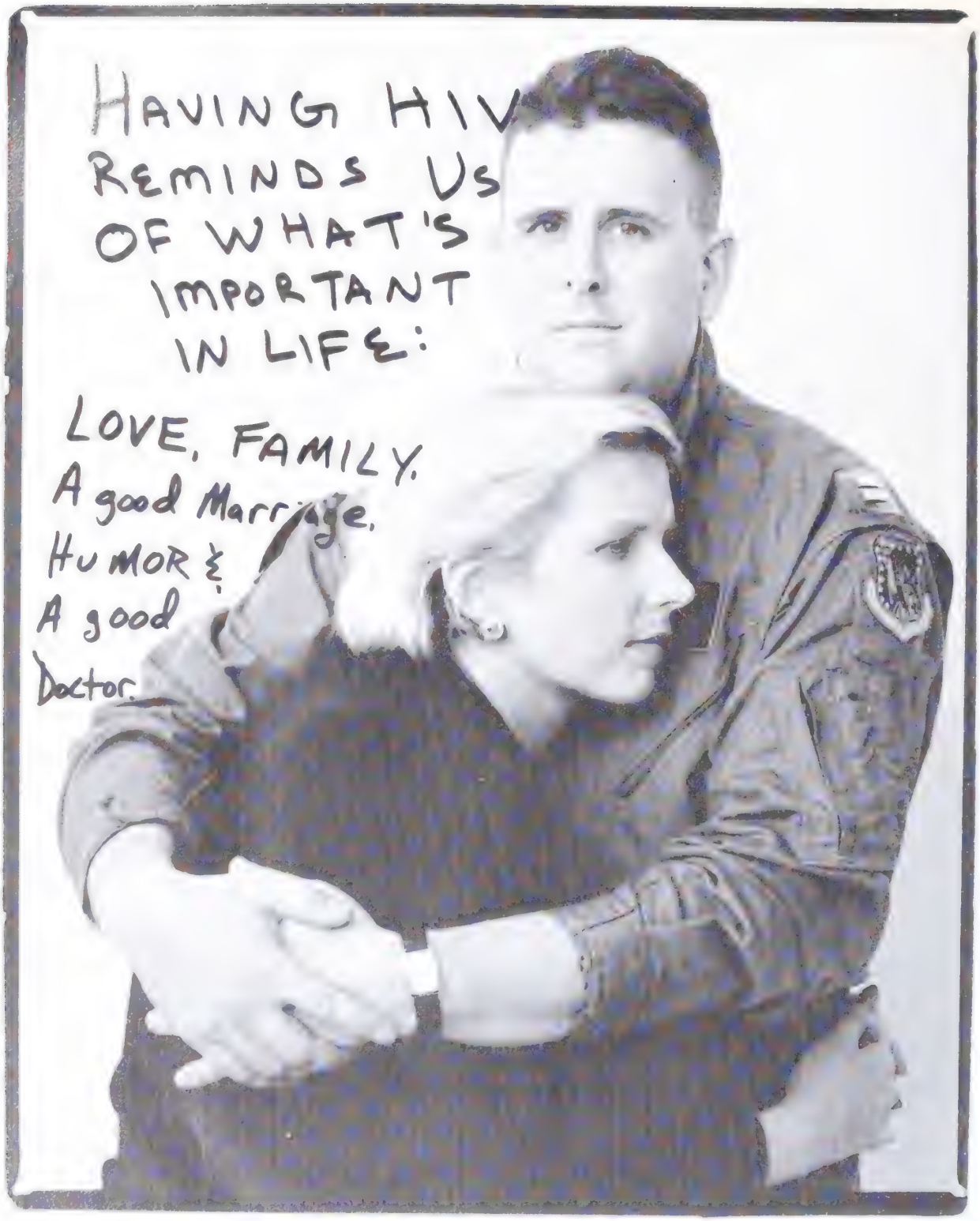

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Illustration by Mick Wiggins As seen in BusinessWeek, December 30, 1991 Issue

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The Spirit of Enterprise: Reviving Entrepreneurship in Large Corporations

Date: September 26-27, 1994
Place: The Willard Hotel, Washington, D.C.

THE FUTURE OF AMERICAN BUSINESS is taking shape. To win, American firms need to adopt an entrepreneurial spirit today in order to compete successfully tomorrow. But, how can corporate giants be encouraged to become more innovative, faster and more enterprising? What are the issues? Who is winning? And where are the rewards?

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Software

GAUGING HOW GOLDEN YOUR GOLDEN YEARS WILL BE

Americans dream of spending their retirement in the Florida sun or exploring foreign lands. But many workers aren't putting aside enough to live comfortably in their golden years. Joint research by two economists, Lawrence Kotlikoff of Boston University and Alan Auerbach of the University of Pennsylvania, shows most baby boomers are doomed to a retirement living standard vastly inferior to their parents'. The economists figure most boomers would need to double or triple their savings rate to achieve the retirement lifestyle of their parents, who have enjoyed generous government benefits, pensions, and a sharp runup in the value of their assets during the 1980s.

With employers shifting from defined pension to 401(k) plans, the onus falls on workers to manage their retirement. Fortunately, many boomers have time to prepare. And there's a raft of software programs available that can help take the guesswork out of planning. The biggest benefit of using software: It lets you set up countless "what if?" scenarios to determine the effect of changes in how much you save and earn, as well as when you retire.

WIDE SWINGS. Most of the programs are available directly from the developers, though some are showing up in stores. A third avenue may be worth exploring: your employer. Several top benefit consultants, including Wyatt and Hewitt Associates, have developed customized programs for clients. These companies provide the software to employees either on diskette or the office computer system. What makes the programs special is they enable workers to calculate the value of accrued pension benefits.

Of course, no software program is a substitute for consulting a qualified financial planner. And no software can calculate with certainty where you'll stand at age 65, particularly if retirement looms far off. That's because the slightest change in the underlying assumptions for future inflation, tax brackets, or income gains can cause dramatic swings in the calculations.

Of all the software, the most powerful may be Rich & Retired. Users can construct a line-item budget for 27 categories—such as medical costs and insurance—for tracking expenses and cash flow. That makes R&R ideal for couples nearing—or in—retirement. The software can also be integrated to accept data from the two big personal-budgeting progra Quicken and Mana Your Money, but process is trickier the manual lets on.

TEST-DRIVE. R&R has er drawbacks, nar that it never lays year-by-year project in a grid format. stead, the data "fla year-by-year for the riod you determine its credit, R&R is or the few programs lets you test-driv first: Its creator, I Tech Software, prov a free demo versio

A close contend Price Waterhouse's Retirement Plan System. It comes $19 "lite" version through catalogs stores and a full $45 gram available Price Waterhouse. some programs si project your net w forward to retire day—and then drop cold—Price Waterh provides detailed ca tions of how far savings and income stretch after you'v tired. While other prog assume your income an penses will be stable d retirement, with Price W house you can adjust numbers as you become active in later years.

Retire ASAP, by Ca Software, includes severa tures missing elsew Gayle Buff, a financial ner in Watertown, M likes Retire ASAP becau such options as the abil enter separate retire ages for husband and The program sports a asset-allocation feature

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DATA: BUSINESS WEEK

much to help with budgeting or portfolio management as to stress—in cold numbers and graphs—the importance of planning early.

Of the three, Buff says she prefers the Vanguard program because of its generous use of graphics, including a nifty thermometer that shows how inflation can affect your retirement income. Vanguard also calculates the yearly distribution from retirement plans, while Fidelity and T. Rowe Price don't. For its part, T. Rowe Price has a nice feature showing the benefits of making periodic vs. lump-sum withdrawals. But it can handle only a single rate of return for all your investments and doesn't provide year-by-year breakouts.

Users of Quicken and Managing Your Money may not be aware that these programs include retirement planning. Quicken, however, can't consider both tax-deferred and taxable accounts together, nor can it estimate Social Security benefits. Managing Your Money looks good by comparison—with a worksheet for analyzing everything from tax-deferred to taxable investments. On the downside, it doesn't make adjustments for early retirement. Still, these programs can provide a valuable service. And when it comes to preparing for the golden years, you can't have too much information—and you can't start planning too soon. *Dean Foust*

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Smart Money

A SECOND LOOK AT A SAFE HARBOR

with the failure of a few large insurance companies. While company pension plans with those GICs were eventually able to recover most of their assets, the crisis prompted plan sponsors to improve GIC accounts by diversifying. Now, you can be fairly certain that your retirement dollars are safe. The best plans offer a pool of GICs from high-quality issuers. However, GICs are still not really guaranteed by anything more than the promise of the institution that issued the contract. So if your plan is one of those dinosaurs that is still putting all the money into just one GIC, make sure the issuer is financially sound.

SHRIVELED EGG? In general, GICs are best for people nearing retirement who will need the funds soon, or investors who can't stomach seeing the value of their nest egg tied to potentially volatile markets. GICs have underperformed equities over time, but they have nearly kept pace with corporate and government-bond accounts and far surpassed money-market funds. Inflation eats away at the real dollar value of any fixed-income investment. So even though your GIC earnings are steady, if you keep all your money in a stable-value account, your nest egg may not go as far as you planned when it comes time to start spending it.

That doesn't mean GICs don't have their place for long-term investors. The beauty of retirement plans is that you can shift the funds among asset classes without incurring any capital gains. So if the current turmoil in equity markets has you feeling queasy, consider temporarily transferring some of your 401(k) money into the GIC option until things calm down. *Amey Stone*

JAMES BEAUCHAMP/BW

Travel

D DAY PLUS 50: A BIGGER INVASION

IN MEMORIAM: 9,386 ARE BURIED IN THE AMERICAN CEMETERY AT COLLEVILLE-SUR-M

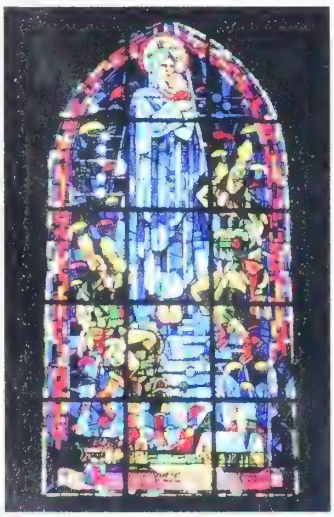
President Clinton and Queen Elizabeth are going. So are an expected 6 million other visitors this summer, as the French province of Normandy commemorates the 50th anniversary of D-day, the Allied landing in World War II. With its lush pastures and half-timbered cottages, Normandy has always been a pleasant vacation spot. But now, history buffs have a special reason to visit: France's biggest bash since the 1989 bicentennial of the French Revolution.

But don't try to visit at the same time as Clinton and the Queen on June 6. Hotels are jammed, leaving many veterans struggling to find rooms. And thousands of VIPs will make it tough to get near the landing beaches and other attractions. Pick another week, and book well in advance. The French government's tourist hot line can help (900 990-0040; 50¢ a minute).

HISTORIC THREADS. The medieval town of Bayeux—miraculously spared in the Allied bombing—is a good base for exploring. While there, go see the Bayeux tapestry, an 11th century embroidery celebrating another Channel crossing, the Norman Conquest of England. Bayeux hotels include the inexpensive Reine Mathilde ($50 for a double room; 011 33 3192-0813) and the classy Lion d'Or ($82; 011 33 3192-0690). Outside town is Le Château, a medieval edifice converted into a bed-and-breakfast ($49; 011 33 3122-0859) that housed correspondent Ernie Pyle when he covered D-day with a "somewhere in France" dateline. These hotels have space from late June on, but book soon. Or stay at a Norman farm. Phone *Gîtes de France*, 011 331 4970-7575.

You'll need a car to visit the dozen D-day sites strung along the craggy coast. Michelin has reprinted its 1947 map of the beaches and cemeteries. Roads signs will also guide you through a *circuit du débarquement*. For $60 per person, you can take a five-hour tour in a 1944 Jeep, bumping along beside cliffs and beaches (Caen Tourist Bureau, 011 33 3186-2765).

Start a motoring tour at Sainte-Mère-Eglise, France's first liberated village, where 13,000 Americans parachuted on the night of June 5. One got tangled up on the church steeple and played dead for two hours before being taken prisoner. His effigy now hangs on the spire, while stained-glass windows depict D-day. Nearby is Utah Beach, a four-mile stretch where soldiers stormed ashore.



THE LIBERATION IN GLASS AT SAINTE-MERE-EGLISE

War is still eerily present. Keep an eye out for German blockhouses that dot the gray, drizzly coastal roads. Bomb craters are visible at La Pointe du Hoc, where 81 U.S. Rangers died assaulting a German stronghold. Toward Arromanches-les-Bains to the east, you'll see fragments of the giant movable harbors still floating in the sea. And everywhere are graveyards: Visit the poignant U.S. cemetery at Colleville-sur-Mer, with its 9,386 white-marble tombstones. Also don't miss the cemetery at La Cambe, where 21,160 Germans are buried.

FIREWORKS. Farther east, outside the bland, rebuilt city of Caen, the Caen Memorial is worth a visit. You'll feel as if you're in the midst of the invasion as you watch split-screen films of Allied troops landing while Germans fight back.

Normandy is organizing special events throughout the summer. A "freedom armada" of the world's largest masted ships together with modern warships will sail down the Seine from Rouen to the sea between July 10 and 17. Rouen will also exhibit Monet's famous paintings of its Gothic cathedral from June 23 to Nov. 14. A marathon [illegible] the beaches to the Caen [illegible] morial is planned for Ju[illegible] Caen will fete its libera[illegible] with fireworks and dancin[illegible] 1940s music on July 9. I[illegible] need advice once you'r[illegible] France, call a toll-free [illegible] glish hot line: 05-201-202[illegible]

Brace for crowds. B[illegible] yet, visit Normandy in [illegible] September, when the [illegible] will be emptier and th[illegible] pie orchards ripe with [illegible] Normandy's apples pr[illegible] Calvados, the brandy [illegible] quaff at midmeal to [illegible] their palates of the [illegible] cream-based cuisine. So [illegible] glass to the Allied troops [illegible] freed this cloudy coast a[illegible] century ago. *Farah N[illegible]*

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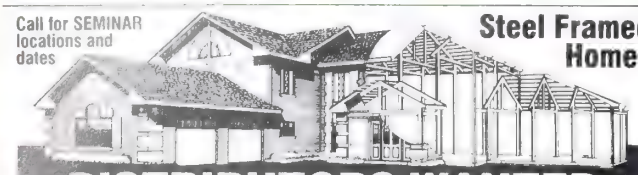

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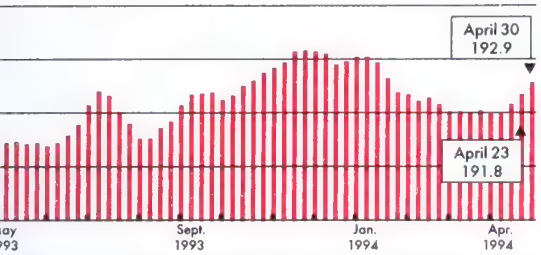
siness Week Index

JCTION

last week: 0.6%
last year: 3.0%

1967=100 (four-week moving average)

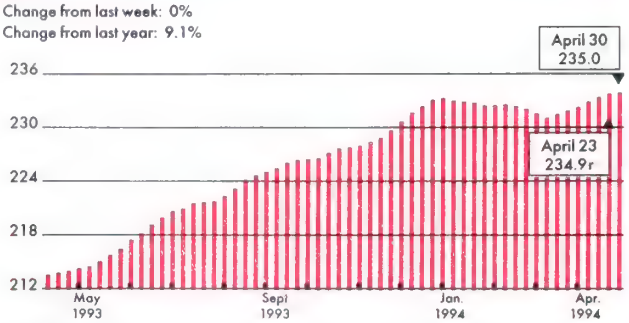


ction index rose during the week ended Apr. 30. Seasonally adjusted s of steel, electric power, crude-oil refining, and paperboard increased, ction of autos, trucks, lumber, coal, and rail-freight traffic declined. Paper was unchanged. Before calculation of the four-week moving average, the ittle changed at 194.3, from 194.2. The index rose to 191.4 for all of m 190.2 in March.

BW production index copyright 1994 by McGraw-Hill Inc.

LEADING

Change from last week: 0%
Change from last year: 9.1%



The leading index increased slightly during the week ended Apr. 30. Higher stock prices and lower bond yields offset most of the drag coming from slower growth rates for materials prices, real estate loans, and the M2 money supply. Data for large-business failures were unavailable. Before calculation of the four-week moving average, the index fell to 234.3 from 234.9. For the month of April, the index rose to 235 from March's reading of 233.2.

Leading index copyright 1994 by Center for International Business Cycle Research

CTION INDICATORS

	Latest week	Week ago	% Change year ago
hous. of net tons	1,921	1,960#	6.3
units	148,635	149,066r#	10.5
) units	124,241	118,580r#	15.6
WER (5/7) millions of kilowatt-hours	53,694	54,593#	2.4
REFINING (5/7) thous. of bbl./day	14,282	14,065#	4.4
thous. of net tons	19,945#	21,447	9.0
D (4/30) thous. of tons	862.1#	849.7r	8.2
) thous. of tons	810.0#	805.0r	−1.5
30) millions of ft.	445.8#	446.0	−4.5
IT (4/30) billions of ton-miles	23.0#	22.9	4.5

erican Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, oleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association ailroads

GN EXCHANGE

	Latest week	Week ago	Year ago
EN (5/11)	104	102	111
ARK (5/11)	1.68	1.66	1.61
UND (5/11)	1.49	1.50	1.53
ANC (5/11)	5.74	5.69	5.43
DOLLAR (5/11)	1.38	1.39	1.27
IC (5/11)	1.43	1.41	1.45
ESO (5/11)[3]	3.320	3.288	3.128

or New York banks. Currencies expressed in units per U.S. dollar, except for British ed in dollars

	Latest week	Week ago	% Change year ago
) $/troy oz.	380.500	375.150	6.8
P (5/10) #1 heavy, $/ton	128.50	135.00	20.7
S (5/9) index, 1967=100	216.2	216.9	5.3
7) ¢/lb.	97.1	93.9	10.4
(5/7) ¢/lb.	63.0	61.3	20.0
) #2 hard, $/bu.	3.76	3.72	13.3
7) strict low middling 1-1/16 in., ¢/lb.	80.24	78.40	40.0

don Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (5/6) S&P 500	451.39	451.15	1.8
CORPORATE BOND YIELD, Aaa (5/6)	7.97%	7.81%	8.1
INDUSTRIAL MATERIALS PRICES (5/6)	99.4	98.7	2.9
BUSINESS FAILURES (4/29)	NA	NA	NA
REAL ESTATE LOANS (4/27) billions	$421.1	$422.0r	3.5
MONEY SUPPLY, M2 (4/25) billions	$3,550.2	$3,556.3r	3.3
INITIAL CLAIMS, UNEMPLOYMENT (4/23) thous.	333	364	−3.8

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
BUSINESS WEEK PRODUCTION INDEX (Apr.)	191.4	190.2	2.0
BUSINESS WEEK LEADING INDEX (Apr.)	235.0	233.2r	9.2
EMPLOYMENT, CIVILIAN (Apr.) millions	122.3	122.0	2.2
UNEMPLOYMENT RATE, CIVILIAN (Apr.)	6.4%	6.5%	−13.5

Sources: BW, CIBCR, BLS

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (4/25)	$1,136.3	$1,137.6r	9.2
BANKS' BUSINESS LOANS (4/27)	290.2	290.8r	4.5
FREE RESERVES (4/27)	1,362r	772r	5.7
NONFINANCIAL COMMERCIAL PAPER (4/27)	154.8	157.0	−1.3

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (5/10)	3.58%	3.81%	2.90%
PRIME (5/11)	6.75	6.75	6.00
COMMERCIAL PAPER 3-MONTH (5/10)	4.73	4.28	3.11
CERTIFICATES OF DEPOSIT 3-MONTH (5/11)	4.65	4.32	3.07
EURODOLLAR 3-MONTH (5/6)	4.33	4.14	3.06

Sources: Federal Reserve, First Boston

the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
ood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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ARY

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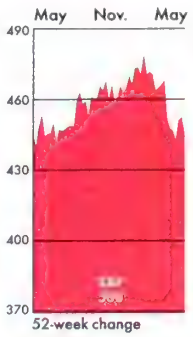
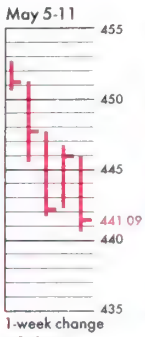
STOCKS

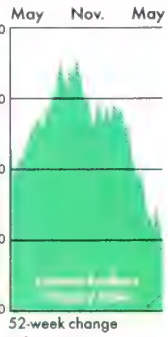


52-week change
−0.7%

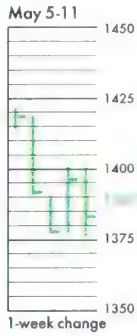


1-week change
−2.3%

BONDS

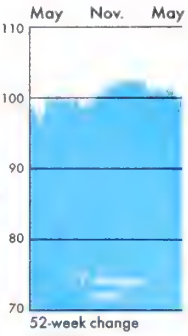


52-week change
−9.2%



1-week change
−2.5%

THE DOLLAR



52-week change
+2.1%

1-week change
+0.8%

ET ANALYSIS

KS	Latest	% change Week	% change 52-week
INDUSTRIALS	3629.0	−1.9	4.2
IPANIES (S&P MidCap Index)	166.4	−4.0	1.5
ANIES (Russell 2000)	245.6	−3.5	7.3
ES (Russell 3000)	254.6	−2.7	−0.1

-TOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
IANCIAL TIMES 100)	3130.5	2.0	9.4
EI INDEX)	20,150.1	3.0	−2.3
E COMPOSITE)	4168.2	−2.4	9.8

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.32%	4.13%	2.95%
30-YEAR TREASURY BOND YIELD	7.61%	7.34%	6.86%
S&P 500 DIVIDEND YIELD	2.98%	2.80%	2.81%
S&P 500 PRICE/EARNINGS RATIO	19.5	19.9	22.4

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	463.2	463.7	Negative
Stocks above 26-week moving average	28.8%	32.7%	Neutral
Speculative sentiment: Put/call ratio	0.43	0.37	Positive
Insider sentiment: Vickers sell/buy ratio	1.55	1.76	Positive

TRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

K LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
	9.7	−9.6	SYNTEX	77.1	18.5	23 1/4
IME	8.1	34.2	OUTBOARD MARINE	14.1	28.1	22 1/4
OLESALERS	7.8	11.5	McKESSON	29.1	93.1	80 7/8
EQUIPMENT AND SERVICES	7.1	−12.7	BAKER HUGHES	10.9	−29.2	19 1/8
OIL	6.6	−9.0	PHILLIPS PETROLEUM	12.7	8.4	32 1/8
K LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
LDING	−16.2	−13.7	PULTE	−20.3	−22.7	23
ING AND CONSTRUCTION	−14.8	26.6	MORRISON KNUDSEN	−26.4	3.6	21 5/8
DUCTORS	−13.7	16.1	INTEL	−14.0	16.7	59 1/2
TOOLS	−10.1	−1.0	GIDDINGS & LEWIS	−12.5	−1.6	23 5/8
ELECTRONICS	−9.8	2.9	LORAL	−11.0	28.8	35 1/2

AL FUNDS

MORNINGSTAR INC

al return	%
SELECT NATURAL GAS	8.5
N STRATEGIC INVESTMENTS	6.8
SELECT ENERGY	6.4

l return	%
INTERNATIONAL GROWTH A	49.6
LATIN AMERICA	48.3
DAS GOLD	43.3

LAGGARDS

Four-week total return	%
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−11.5
G.T. LATIN AMERICA GROWTH A	−11.3
MERRILL LYNCH LATIN AMERICA B	−9.4

52-week total return	%
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−27.7
MONITREND GOLD	−27.3
PILGRIM CORPORATE UTILITIES	−20.3

IVE PORTFOLIOS

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Foreign stocks	Gold	U.S. stocks	Money market fund	Treasury bonds
$12,314	**$10,672**	**$10,317**	**$10,203**	**$9,963**
−1.32%	+1.35%	−1.55%	+0.04%	−1.44%

page are as of market close Wednesday, May 11, 1994, unless otherwise indicated. include S&P 500 companies only; performance and share prices are as of market close May 10. Mutual fund returns are as of May 6. Relative portfolios are valued as of May 10. A more detailed explanation of this page is available on request.

LABOR HAS ITS WORK CUT OUT

The modern U. S. labor movement took shape in the 1930s and 1940s, when millions of industrial workers joined together into powerful unions under the aegis of the New Deal. These unions signed contracts that formalized the adversarial relationship between labor and management: Labor bargained for higher wages, better benefits, and restrictive work rules, while conceding to company managers the right to run the business.

This rigid division of responsibility made sense back then: Workers got rising living standards, and their employers reaped the benefits of a stable workforce and good customers. But old-style unions are woefully outdated in today's global economy. Corporations must react with lightning speed to changes in technology or consumer taste. To achieve flexibility, many companies are setting up workplace teams and helping employees to acquire the skills needed to take more responsibility.

A few unions have been willing, even eager, participants in this cooperative process. Indeed, even the stodgy AFL-CIO finally endorsed cooperation early this year—after more than 15 years of resisting. But if unions are to revive, or even survive, as an American institution, the labor movement must redefine itself. Unions must replace "us vs. them" with an attitude of "we're all in this together." Tomorrow's union leaders must be as knowledgeable about technology and managing as they are about grievance procedures. And they must be willing to balance employees' desires for pay or easier jobs with companies' competitive needs.

Of course, labor can't do this alone. Employers share the responsibility for America's heritage of labor-management antagonism. But labor can't wait for management to come to it. If unions learn to adapt, they can serve a vital function in the U. S. economy. Otherwise, their slow slide into oblivion is sure to continue.

MAKE VIETNAM A MOST FAVORED NATION

For 25 years, Vietnam has been an open sore on the U. S. body politic: first as a military quagmire and then as a bitter reminder of failure. The U. S. response to defeat and the Vietnamese intransigence that followed was to block international aid and forbid American companies to do business there. Only in the past year has Washington begun rebuilding links by allowing aid from international organizations and lifting the trade embargo.

But that's not enough. It's time now, not to forget the past, but to move towards establishing normal ties with Vietnam—whose economy is growing 8% a year. The key step is to grant most-favored-nation status to Vietnam, letting Vietnamese goods enter the U. S. at favorable tariff rates. That would give Vietnam equal footing with most oth countries, including Russia and—at least for now—China.

Why MFN for Vietnam? To start with, Vietnam will spending billions on telecommunications, power plants, a airliners. Strained trade relations between the two co tries make it less likely that American companies will their share of these contracts. Moreover, despite the confl of the past, Vietnam could be a tremendous ally for U. S. In both the North and South, Americans are highly garded, and American companies are welcomed as a coun balance to Japanese, Chinese, and European investment.

Granting MFN to Vietnam is sure to be controversial. A given the Clinton Administration's foreign-policy woes, the sue is likely to be stuck on the back burner. It should co to the fore.

THE INNOVATORS BEYOND THE BELTWAY

"Government is not the solution to our proble Ronald Reagan said in his first inaugural addr "Government is the problem."

It often seems that way. Washington politicians of b parties seem to make laws with little regard for the co quences. One cynical case in point: Faced with tight buc constraints, Congress instead imposes costly mandates states, localities, and business. Some mandates, such as il rights and pollution control, are necessary. Yet mand have proliferated beyond reason, spawning monstrous bur cracies that stifle initiative.

The federal government should issue fewer order state and local governments. Instead, it should learn f those governors and mayors who are taking a fresh, entr neurial approach to public policy problems. These innova are attempting a government overhaul on a scale not s since the Progressive movement around the turn of the tury. The objective: To invigorate government by allov citizens more choice, injecting competition into public se es, and emphasizing customer service.

Who are the movers and shakers? Democrats such Edward G. Rendell, mayor of Philadelphia, and Law Chiles, governor of Florida. Republicans like Stephen G smith, mayor of Indianapolis, and William F. Weld, gove of Massachusetts. The traditional labels—liberal or conse tive, Democrat or Republican—are less important tha shared vision of reform.

And why now? Money and jobs. Yes, the economy is proving, but the taxpaying middle class is still fed up. businesses, more mobile than ever in an Information Age vote with their feet by moving to regions where gov ments are cheaper and work better.

The problem is not government, but inefficient, bureau ic government. And in the laboratories of democracy, gov ors and mayors are finding workable remedies for the tion's social problems—deteriorating schools, inadeq medical care, a failing welfare system—that the federal ernment could well learn from.

YOUR GUIDE TO WIRELESS GEAR

BusinessWeek

994 A McGRAW-HILL PUBLICATION $2.75

ELECTRIC CARS

ARE THEY THE FUTURE?

PAGE 134

ICAR
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TROPICA
Renaissance Cars

ECOSTAR
Ford

CONSEQUENTO
Horlacher

Even with all the luxury features in this car, there's something missing. Nearly a quarter of a mile of wire.

The Infiniti Q45.[*]

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If anything epitomizes the Infiniti philosophy of offering customers everything that's possible in a luxury car, it's the ingenuity our engineers must constantly exercise in living up to that philosophy.

For example, it's generally known that the more luxury features a car has, the more wiring is needed to operate them. More wire, more weight, more complexity, more potential electrical problems.

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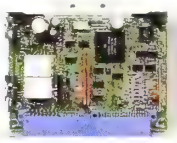

Controlled by an electronic "brain," it allows many different devices to operate through a single wire (much like a fiber optics line), helping to eliminate the likelihood of electrical problems. And doing away with about 1,100 feet of unnecessary wire.

If you'd like to learn more about this, or any of our other examples of innovative thinking, call 1-800-341-4560. And by all means take a Guest Drive in the Q45 at your Infiniti showroom.

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BusinessWeek
NUMBER 3374 MAY 30,

ACID TEST: BUSINESS WEEK'S WOODRUFF DROVE 400 MILES IN AN ELECTRIC MINIVAN—BUT HAD TO KILL HOURS RECHARGING

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It's crunch time. By 1998, 2% of high-volume carmakers' vehicles sold in California must be electrics. So Detroit is scrambling to develop a viable electric car, and a pack of entrepreneurs are racing right beside the Big Three. Are electrics the future? BUSINESS WEEK's David Woodruff sets out—in a prototype electric minivan—to find out

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Up Front

HEROES FOR MBAs

Name the individual you admire most in the world today

	1994	1992
FATHER	12%	14%
BILL GATES	5	2
BILL CLINTON	5	0
MOTHER	4	7
HILLARY CLINTON	4	0
JACK WELCH	4	0
MOTHER TERESA	3	5

DATA: FUQUA SCHOOL OF BUSINESS, DUKE UNIVERSITY

won't work in industries they find ethically suspect. More than 80% shun tobacco outfits; 26% avoid liquor producers. Philip Morris has the dubious distinction of being the least admired company. As for corporate loyalty—forget it. Only 5% expect to work for their next employer for their entire career, and 48% plan to stick around for less than five years. *Lori Bongiorno*

B-SCHOOL NOTES

MAYBE FATHER STILL KNOWS BEST

What shining star do America's future business leaders look toward? Dear old Dad. That's one of the findings in a survey of 1994 MBA grads at 11 top-tier B-schools, conducted by Duke University's Fuqua School of Business. Their fathers were most admired by 12% of students, making Dad the No. 1 choice (table). Microsoft's Bill Gates does well, ranking second at 5%, tying Bill Clinton. Bill and Bill beat out MBAs' mothers—and Mother Teresa.

Often depicted as money-grubbing, the MBA crowd claims an altruistic side. An overwhelming 71% say they

DRAWN AND QUARTERED

DOUBLE DUTY

A SECOND CAREER FOR SOME OLD WARHORSES

Ready to put Arm & Hammer under your arm? How about a spritz of Lysol in your gym shoes? These may sound odd, but marketers are working overtime thinking up new ways for you to use well-known consumer products around the house.

In the industry, it's being called the "versatility" strategy. Marketers say it's on the rise. Latest examples: Arm & Hammer Deodorant Anti-Perspirant with Baking Soda. A&H has already stamped its logo on products from kitty-litter deodorizer to toothpaste. And there's a big new ad push from Clorox, promoting bleach as the solution for problems from fungus in shower stalls to tainted water supplies.

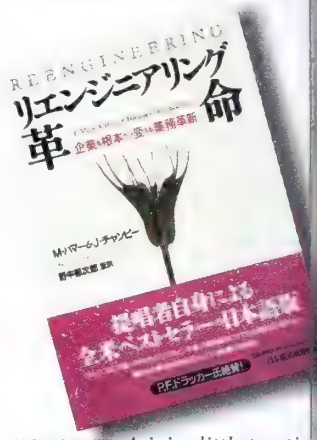
DEODORANTS: *Arm & Hammer's new gig*

A big reason to expand the uses of familiar products is demographics. The average annual increase in U.S. households has dropped from 1.7 million in the 1970s to 1 million in the 1990s, according to the Census Bureau. And 1993 was even slower: Only 700,000 households were added, taking the total up to 96.4 million. The fewer new households there are, the fewer new sinks for household-goods marketers to clean, and so forth.

Among consumer-goods marketing types, the lesson is clear: New ideas are vital. Look at how Arm & Hammer got hammered in 1993, a quiet year for new-product development at parent Church & Dwight's consumer-products group. C&D saw net sales gain a meager 0.2%, to $411 million. That's down from a 12.8% average annual increase from 1989-1992. *Jonathan Berry*

REQUIRED READING

A U.S. PRODUCT JAPAN LOVES? BUSINESS BOOK



HOT STUFF: *A juicy little treatis*

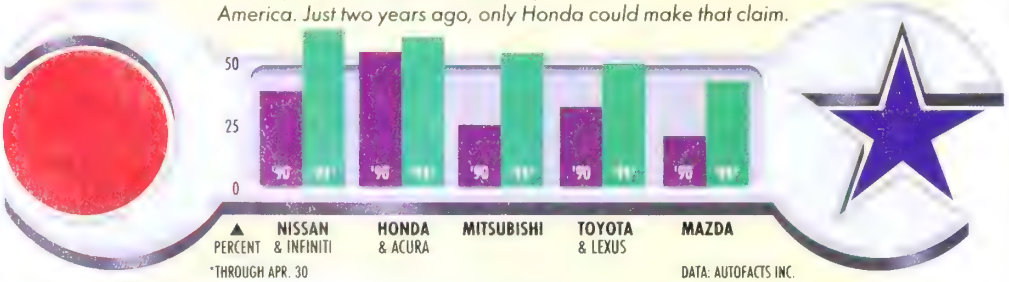
One American produc the Japanese can't g enough of is business book Out in translation only for s months, *Reengineering t Corporation*, by Michael Har mer and James Champy, selling well in Japan—250,0 copies in print, vs. 450,000 the U.S., where it's been o for a year.

The trade issue really i trigues Japanese reader *Cracking the Japanese Mark* by James and Jeffrey Mo gan, sold modestly in t U.S., says publisher Simon Schuster, but became a bes seller in Japan. The Harvar Business School Press tran lates three-quarters of its 2 titles yearly into Japanes Why? Japan is fascinated b business and loves to read. publishes 40,000 titles pe year, vs. 49,000 in the U.S with twice the population.

THE BIG PICTURE

MADE IN AMERICA-SAN

It's almost unanimous. Toyota and Mitsubishi have become the latest Japanese auto makers to reach the point where half the cars they sell in the U.S. are made in North America. Just two years ago, only Honda could make that claim.



FOOTNOTES

Change between 1987 and 1992, total number of engineers: *down 2.9%*; economists: *up 1.1%*; social workers: *up 22.2%*

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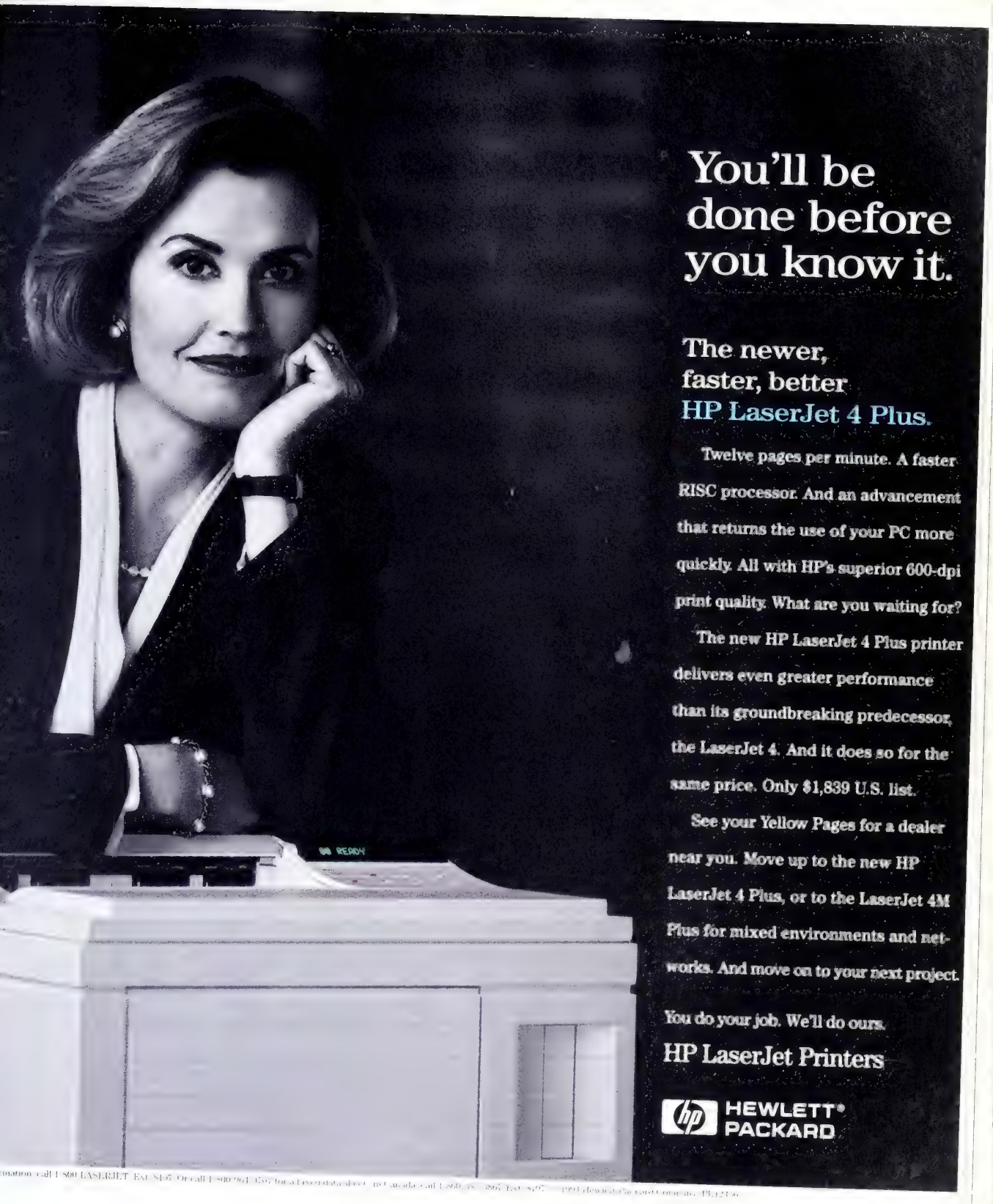
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Readers Report

DOWNSIZING: THE DOWN- AND UPSIDE

Finally, an article that clearly reflects the reality of downsizing ("The pain of downsizing," Cover Story, May 9). If some executives refer to downsizing as a fad, they're being too kind. I'd call it a sickness. While it may be needed in some instances, it's just another way of sucking value from productive companies. Downsizing is to the '90s what LBOs were to the '80s, and it will be equally destructive.

William J. Steinbicker
Minnetonka, Minn.

As a Nynex employee, I wish to comment on our downsizing efforts. The changes from the traditional telephone-company culture, the uncertain employment future of 16,000 people, and wholesale realignments of Nynex structures and processes are unsettling, to be sure. They are also essential for Nynex to move forward through the '90s in a highly competitive, evolving environment.

The difficulties of accepting—and working amid—uncertainty, upheaval, and fear cannot be dismissed. The efforts to care for the individual cannot be fully appreciated by those most affected by the changes. All taken into account, however, the whirlwind now present in Nynex must be expected to result in opportunities for outstanding development of the corporation and its employment force.

Tim Wright
Training Director
Nynex
Stamford, Conn.

Wholesale cuts by percentage (across the board) were the old prescription. They were never enough and usually spelled disaster in morale, service, and sometimes in corporate survival. Effective downsizing hurts, but at the same time contains the element of great satisfaction for those who "discover" the better way to do the job.

William B. Halstead
President
Omega Organization Inc
Bellport, N.Y.

I have been both a survivor and victim of downsizing and could easily transpose different names onto the faces and personalities you portrayed.

I left my company in December, 1992. Since then, I have had a lot of time to reflect on what has happened to me and to the great many people I have met who also have been downsized.

To you Nynex departees, I say, get a life. Don't bother suing; this is like the dog that sits on his dead master's grave, hoping it is all a bad dream. Take what ever money you may receive and get on with life. Look deep down inside yourselves. Be honest. You really have wanted out for a long time. The old place isn't the same as it was 10 or 15 years ago. Be glad someone did the thinking for you and gave you a new lease on life.

Gary Morris
Agoura Hills, Calif.

Over the years, you have done many articles about companies and managers that have made "tough choices," which means workers are going to be fired. I have not read a single article about an American manager making the really tough choice of keeping employees and crafting a strategy of how to increase market share and create jobs.

Thomas A. Smith
Lake Orion, Mich.

I can definitely identify with "The Victim." Recently, I was "rightsized" from my company, and I did not see the top officers sharing the pain. Executives still took "emergency" trips to Europe and planned meetings in Paris that coinci

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dentally were during Fourth of July weekend. For these companies to regain the loyalties of workers, top managers must learn to share the pain.

Willie King
Houston

In a successful capitalistic society, corporations have two sacred duties: profits for investors and jobs for people. A society that gives a CEO a $4 million bonus for throwing 10,000 people out of work is a sick one.

R. O. Evans
Bakersfield, Calif.

Reengineering should not be misinterpreted as a synonym for downsizing. Certainly, a result of reengineering may be downsizing. But "radical redesign" often leads to additional staff and continued growth. For example, Hewlett-Packard is constantly "reinventing"—a much better synonym for reengineering—its products and processes to meet changing customer needs.

Donald L. Peter Shafer
Towson, Md.

More traumatic than losing a job is the inability to obtain a new one. Unlike the swift knife of dismissal, the day-to-day search and rejection can slowly strangle your self-confidence and suffocate your marriage. After six to nine months, your friends and associates begin to question your past ability; after 12 months, similar doubts appear in your spouse and family. Calls and letters go unanswered, and solo late-night TV replaces what once was a vibrant marriage. A slow, excruciating personal demise takes place, for which there is no Dr. Kevorkian.

Michael J. Hirko
Gig Harbor, Wash.

I just wonder how long executive looting by pocketing the salaries of thousands of people tossed out in the streets can continue before either the government steps in or a revolution occurs. It takes the average worker half his lifetime to purchase a home, accumulate some savings, and some retirement benefits. It takes about six months to a year of unemployment to lose it all.

William J. Rose
Carlsbad, Calif.

PUTTING A FINGER ON DIGITAL'S WOES

I applaud your cover story because it highlights downsizing as simply the latest in a long line of failed, simplistic panaceas.

At the same time, in your article "Desperate hours at DEC" (Top of the News, May 9), I decry Gary McWilliams' drubbing of Robert B. Palmer, when Digital Equipment Corp.'s woes are really the result of its board of directors placing the blame first on Ken Olsen and lately on Bob Palmer, instead of seeing to it that problems facing the company were first defined—and then fixed.

Rowland Brandwein
Nashua, N. H.

Both your articles excited my hopes for a unique insight, but I was sorry to find that you missed the chance.

Your story on Digital mentions in passing that the workforce numbered 118,000 in 1991 and that the company now employs 92,000 Digits. Unfortunately, the article does not even acknowledge this major downsizing effort, nor does it discuss how this failed to avert, or perhaps exacerbated, the "crisis at Digital."

The insight that I had been hoping you would discover is that downsizing, while it is sometimes an unavoidable necessity in the face of technological evolution, is by no means a cure-all for strategic blunders. Let the protracted crisis at Digital Equipment be a cautionary example.

Bruce McCulley
Troy, N. H.

THE SBA: A REPORT FROM A DISSATISFIED CUSTOMER

In reference to your story "Giant steps for small business" (The Corporation, May 9), kudos for Erskine Bowles's reform of Small Business Administration loans, but I think we should not get too carried away with SBA rhetoric on export promotion. If export promotion is a major priority of this Administration, then there's little hope for any Clinton priority.

I recently accompanied a former Foreign Commercial Officer in visits to several SBA and Commerce Dept. centers in Western states, only to discover that, so far as export promotion is concerned, their capabilities ranged from ignorance to intense lack of interest. Some of them didn't even have access to Commerce's CD-ROM database of export opportunities. The rest didn't know how to go about using it.

Part of SBA's problem is its unique method of abdicating responsibility to a local community college, which can be charged with small-business export promotion for an entire state. Direct assistance from either Commerce or the SBA's International Div. in Washington is only one phone call (or several unturned ones) away.

Kenneth Chal
Bend, Or.

THE EMBARGO ISN'T FAZING FIDEL

What an excellent exposé of t bankruptcy of the U. S. embar on Cuba ("Fidel's end run around Un Sam," International Business, May Not only are foreign companies taki unchallenged advantage of the econom opening in Cuba, but the embargo is ing nothing to get rid of Fidel Castro

Lorenzo A. Canizar
Trenton, N.

LET THE GOVERNMENT WRITE ITS OWN OPERATING SYSTEM

Your article "Gunning for Microso The Fed's new weapon" (Inform tion Processing, May 9) shows that t U. S. taxpayer's money is going to t wrong thing if the government is addi several "professionals" to its payroll bring antitrust proceedings against M crosoft Corp. If the government war an open operating system, then hire t same number of programmers and wr one.

New computing platforms that do r rely on Microsoft are on their way. Th are based on RISC (reduced instructi set computing) processors that are co petitively priced, compared with an In Pentium machine running MS-DOS a Windows. IBM and Apple Power PC, D Alpha, and others are providing alter tives that even run your favorite M crosoft application.

By the time the smoke clears fr Bingaman's activities, the industry m have another, more open, computer a chitecture, without her efforts.

Alex D'Ar
Helsinki, Finla

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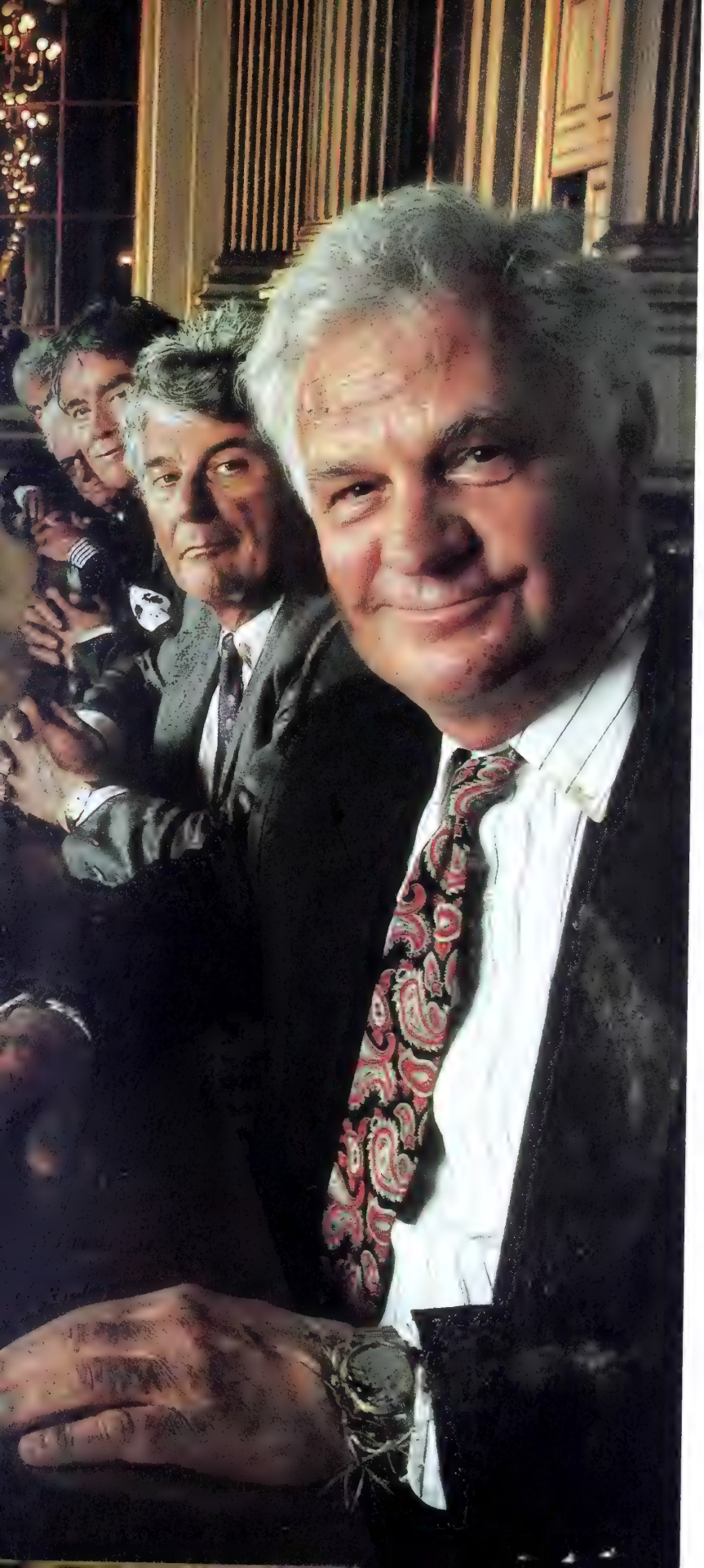

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SANTA FE, TAOS, AND...BISBEE?

James R. Burnett, the *Bisbee Observer*'s "Barnyard Philosopher," hopes to erect a statue to the Unknown Hippie who discovered Bisbee in the 1970s, after Phelps Dodge Corp. shut the copper mines in this Arizona town. The hippies turned Bisbee into an arts colony, with some 100 writers and artisans, that helped restart the economy.

Burnett is less keen on immortalizing the First Californian who followed the hippies. Once Bisbee was firmly established as an arts colony, it was discovered by other outsiders, many of them stressed-out refugees from the Golden State. Burnett settles down over his salad at the Copper Queen Hotel, then admits that the Californians "haven't hurt us any. I'm hoping they will mellow out."

They probably will, because Bisbee does seem to have that effect. "People make a connection here," says Rod Kass, a former Coloradan who connected with the town in 1989. He worked on the chow line at the state prison in Douglas, then delivered baked goods around Bisbee. Last summer, he opened Cafe Roka in the former Tavern Bar, an old mining-era saloon. Cafe Roka serves such fare as penne with smoked salmon and asparagus crepes. It's popular with locals—but also with tourists, who are coming here in increasing numbers as word spreads about Bisbee's out-of-the-way charm.

This quaint, turn-of-the-century copper town of 6,300, near the Mexican border and 200 miles from Phoenix, is a jumble of miners' shacks and Victorian cottages studding the steep slopes of the Mule Mountains canyon. Long flights of str like zippers against the hillsides, de Bisbee today. The Green Tomatoz, lo cal singing group, pay tribute to h steps in their song, *Driving in Your* "Someone's seen her around—up h stairs, down the stairs...." Instea a marathon, Bisbee has an annual s climb—500 people race up 1,001 ste

The town is so steep, it reminds of Central City, Colo., where it was the ashes thrown out of a house on of the mountain landed in the chim of the next house below. Bisbee rem others of another Colorado town. Aspen 30 years ago"—without the sk says Daly Nelson, who moved here year from Aspen to write. She lives miner's cottage on Laundry Hill proximately "75 steps u

Nelson, along with o er newcomers, raves abo the climate, the art gall ies and crafts boutiqu the historic buildings th line Old Bisbee's narrow, crook streets—and the low living costs. T town is a refuge for artists, such painter and gallery owner Judy Per who can't afford Santa Fe's high pric and folks who've turned their backs Aspen's celebrity-studded lifestyle.

Nelson is part of the new wave w come "with more than a shoestring," Shirl Negus puts it. She and her hu band, Marc, are recent arrivals. Th worked for Apple Computer Inc. in C pertino, Calif., until they got fed up wi the hour-long commute from Fremor Two years ago, they sold their hou and paid $240,000 for an old elementa

EASY STREETS: UNLIKE THE HIPPIES AND ARTISTS WHO PRECEDED THEM, NEW ARRIVALS BRING "MORE THAN A SHOESTRING"

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school in Bisbee, which they run as the Schoolhouse Inn, a bed-and-breakfast with nine guest rooms.

"The seller [told Bisbeeites that] a California couple was buying the place, and we thought we'd be shunned," says Negus. Instead, when they arrived in Bisbee, they found a note from neighbors, inviting them for dessert. The couple hung their California license plate next to the front door to remind them of their old life.

The Neguses and others are driving up prices in Bisbee. Houses that sold for $5,000 to the hippies now fetch as much as $50,000. Commercial properties have gone from $15,000 to $150,000. Real estate has gone up 300% over the past three years, "and I don't know when it will peak," says Rosalie Butler, a realtor here for 21 years.

"BUILT ON GRIT." Of course, appreciation's not all bad, says City Treasurer Jeri M. Dustir as she shows me around Old Bisbee. "With mortgages, you have to pay attention to cash flow. That means more attention to marketing and customer service." New people are putting money into old buildings, but they're trying hard not to "oversanitize." Says Dustir: "It's a town built on grit."

Nobody ever accused Bisbee of being oversanitized in the past. Founded in 1880, "the Queen of the Copper Camps" was a rough-and-tumble place with a population of 35,000 early in the century. Technically, Bisbee wasn't a company town, but it was dominated by Phelps Dodge, and it was one of the country's biggest copper producers. During Apache scares in the early days, schoolchildren hid in mine tunnels. In 1917, when the Industrial Workers of the World called a strike, 1,200 Wobblies were loaded into cattle cars and dumped in the desert to fend for themselves.

NEWCOMERS. By 1951, Phelps Dodge had turned to surface mining, opening the giant Lavender Pit, which didn't get its name for its colorful hues but from mine manager Harrison Lavender. A century of copper mining ended in 1974, and shortly afterward, Bisbee's population dropped to as little as 5,500. Now, city and county governments are the biggest employers. A number of newcomers find service jobs, but many are retirees or trust-fund babies, known in Bisbee as "lucky sperm-club members."

Bisbee has so far escaped the real estate hucksters and speculators who have a knack for finding hot towns. There are no condos or townhouses, no subdivisions or resort hotels. A big San Francisco developer came into Bisbee a few years ago, buying up the YMCA, the Pythian Castle, and other landmarks. But "Bisbee has a way of grinding up money and grinding up people, and by the time Bisbee got through with them, the boys ultimately went broke," says Barnyard Philosopher Burnett. Adds Stephen M. Desens, superior court judge for Cochise County: "That soured the town on loudmouths who show up and say: 'I'm your savior.'"

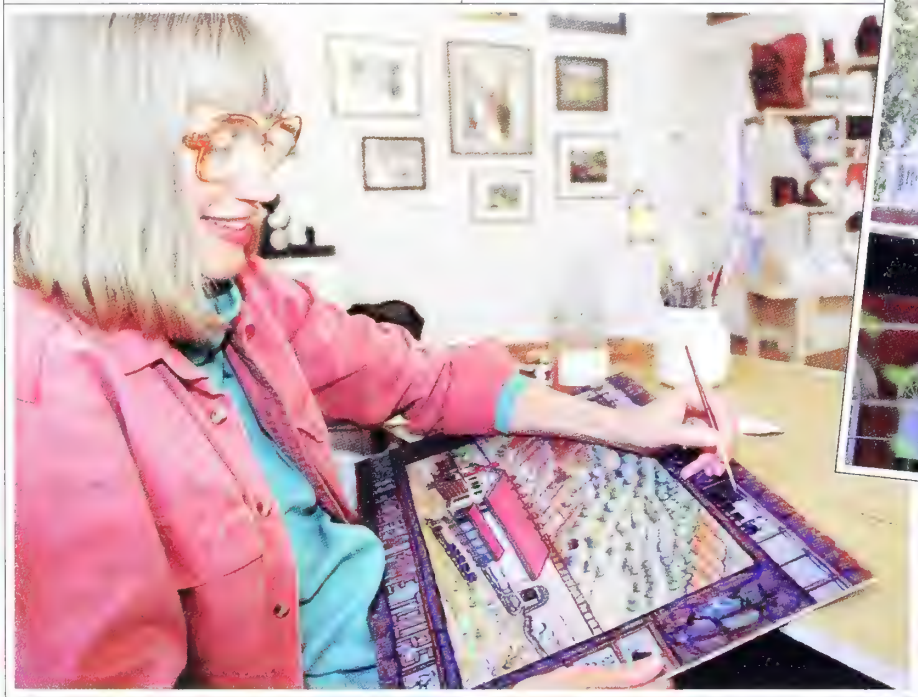
The things that make Bisbee unattractive to hard-nosed investors makes it a haven for Bisbee's newcomers. "There are no conveniences here," ... Sonja Templeton, a potter who mo... from Tempe two years ago because i... bee is a place where "you can we... purple hat and not stand out i... crowd." Even Mayor Mike "Lefty" ... ovich concedes that "people aren't g... to climb them stairs and walk th... hills." If they would, says artist Carc... Norton, the town could always publi...

Bisbee's scorpi... snakes, and kissing bugs, which attack ... the night and leave swollen blotches ... arms and legs. Norton lived in San... Fe for 17 years before she threw ever... thing into her pickup and headed f... Bisbee last year. Bisbee's best hope, sh... says, is that "when people come her... they will think it's good enough an... won't gold-leaf it."

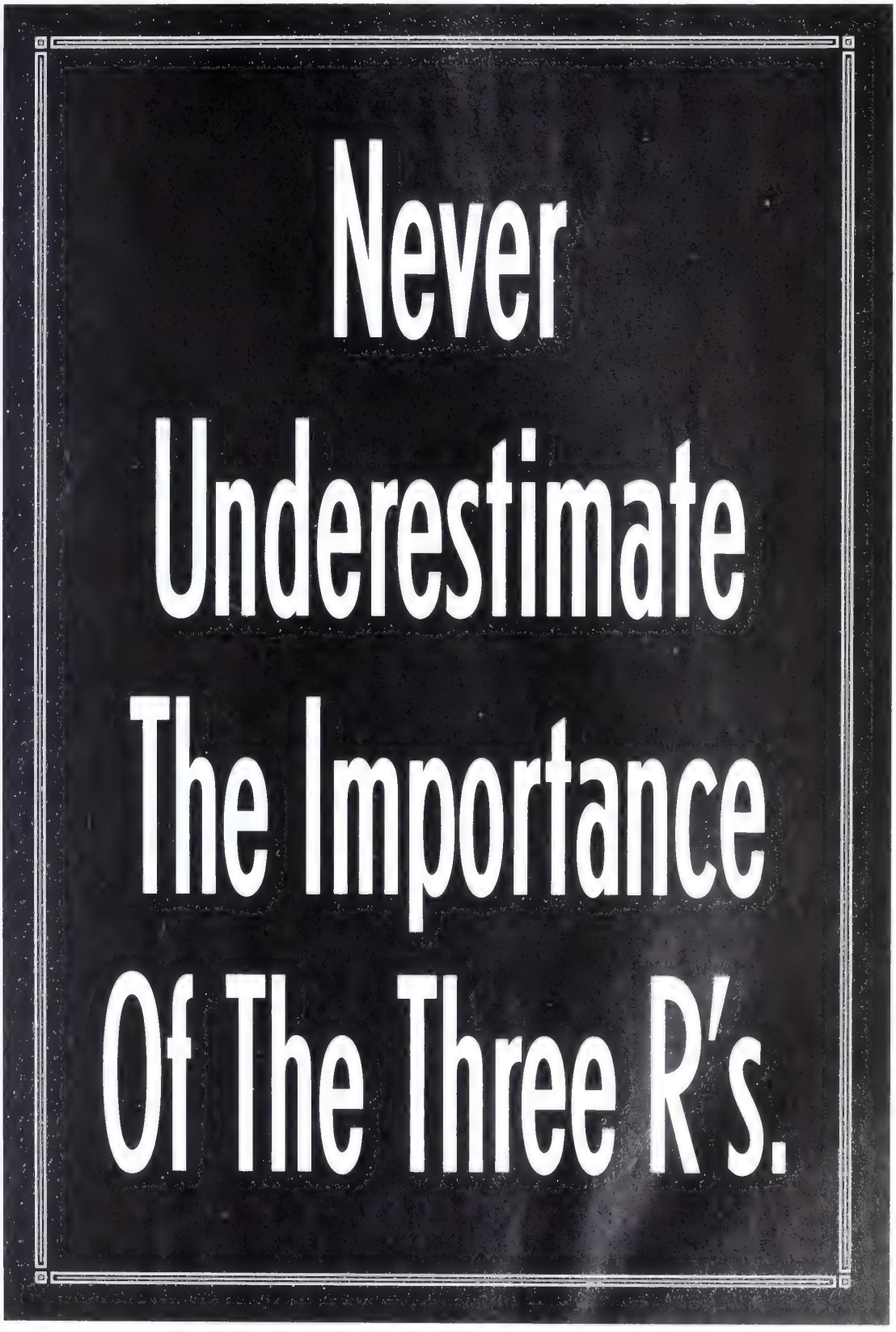
I hope she's right, but I've lived i... the West a long time, and I remembe... when Aspen, Santa Fe, Taos, Sedon... and other spots were charming, too... That didn't stop speculators and jet-set... ters from gilding them. Then, as I clim... up the mountain for a last look down, ... put my money on Lefty Lazovich. Then... stairs and them hills are a killer.

SANDRA D. ATCHISON

Correspondent Atchison is based in Denve... and often writes about small towns in th... West.



JUDY PERRY AT HER ART GALLERY AND PYTHIAN CASTLE: BIG-TIME DEVELOPERS HAVE FOUND BISBEE ROUGH GOING. THERE ARE NO CONDOS, NO TOWNHOUSES, NO SUBDIVISIONS, NO RESORT HOTELS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STANDING FIRM: A VICE-PRESIDENTIAL MEMOIR
By Dan Quayle
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DAN QUAYLE, NO WARTS AND ALL

Dan Quayle believes he is heir to the legacies of Richard Nixon and Ronald Reagan: After their political obituaries were written, they rose from the dead to become President. Quayle is convinced he shares that destiny, and that dream—or delusion—has led him to write *Standing Firm: A Vice-Presidential Memoir*. The most ridiculed Vice-President in history sets out to prove that a cabal of liberal Baby Boomers in the media conspired to destroy him. Why? They couldn't bear that the first member of their generation to reach high office was—ugh!—a conservative.

To his credit, Quayle has penned a refreshingly honest book for a politician, particularly one who thinks he has a future. He accurately captures the Bush Administration's key players, from George Bush with his wishy-washy domestic instincts to James A. Baker III with his self-promoting manipulativeness. He makes a compelling case that the press was grossly unfair in casting him as a dim bulb. And he admits his errors. During the 1988 campaign, he says, "my biggest mistake was allowing myself to be put in a position where I couldn't take responsibility for anything."

But when it comes to proving that he's Presidential timber, Quayle falls short. Missing are deep thoughts, insights, or any agenda. He devotes a chapter to the infamous "potatoe" incident but doesn't say what he would do as President.

Open-minded readers will conclude that Quayle is not a nitwit. But they also will come away with an impression of a man who naively overestimates his talents. Quayle boasts of his prowess in 1980, when he knocked off incumbent Senator Birch Bayh, a "giant" in Indiana politics. What he neglects to note is th his election had a lot to do with Rona Reagan's coattails, which carried in office a group of conservative GOP sen tors so talentless that they were dubb the "Conehead Caucus." And Quayle m produce snickers when he confides th after his lopsided 1986 reelection: briefly contemplated making a run f the Presidency myself in 1988."

Quayle makes the same mistake d scribing his Vice-Presidency. He tak more credit than he deserves for sha ing policy and influencing events, when he had to fill in for Bush to he crush a coup attempt against Philippi President Corazon Aquino. *Standi Firm* is at its best wh Quayle forgets himse and plays observer. Bu is captured as a Cor mander-in-Chief who r ishes conflicts with fo abroad but fears confro tations with domest aides. Mikhail Gorbach is revealed as an insecu blowhard, Margar Thatcher is depicted as stern governess, and Ja Kemp is dismissed as disloyal egotist.

History buffs will tha Quayle for this view fro within the White Hou inner circle. But would-b voters who aren't alrea sympathetic will perceiv a man more obsessed with correcti the record than getting on with his li If Quayle expects to have a political f ture, he had better hope that *Standi Firm* doesn't become a best-seller.

BY OWEN ULLMAN

Washington News Editor Ullmann co ered the Bush White House.

While refreshingly honest, Quayle's book is devoid of deep thoughts, insights, or any political agenda

BOOK BRIEFS

THE CHOICE
By Russell D. Roberts
Prentice Hall • 113pp • $11.95

FREE-TRADE FANTASY

Trade isn't what you'd call a sexy subject. While trade policy profoundly shapes the lives of ordinary Americans, the topic puts most of them to sleep.

In *The Choice: A Fable of Free Trade and Protectionism*, Russell D. Roberts of the Olin School of Business at Washington University of St. Louis, pierces the fog. The book, a populist defense of free trade, puts the complex macro-economic issues surrounding the North American Free Trade Agreement and the emerging global economy into understandable terms. And it's fun to read—honest.

Roberts' conceit is pure Capra-corn. Calling to mind *It's a Wonderful Life*, he sends 18th century English economist David Ricardo back to earth. It's 1960, and U. S. sales of Japanese TVs are starting a surge that will drive virtually every U. S. maker out of the business. Ricardo's mission: Stop an opportunistic senator from becoming President and closing the U. S. to exports.

The angel/economist finds Ed Johnson, a very Midwestern CEO of a TV maker, who is drawn to the senator's protectionism. To set him straight, Ricardo flashes forward to what America will be like in 1995, with and without barriers.

In the protectionist U. S., everyo drives a Ford Fairlane or a Chevy C price. There are no big-screen TVs voice-controlled computers. Microso Corp. CEO Bill Gates is a mechanic. (He a car nut.) There's no *Aladdin* movie Walt Disney Co., unable to sell abroa folded years ago. And Ed's daughte who under free trade earns an MBA ar directs a company's international sales, living a decent, dull life as a housewif

Economist Roberts doesn't gild th lily. Under free trade, Ed learns, h business will eventually fail, and h workers will lose their jobs. Still, E derails the senator's quest. The ending a surprise, the journey a pleasure. Ar the payoff for the reader is a broade more vivid appreciation of trade issue

BY DOUGLAS HARBRECH

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WILD RIDE: THE RISE AND TRAGIC FALL OF CALUMET FARM INC., AMERICA'S PREMIER RACING DYNASTY
By Ann Hagedorn Auerbach
Henry Holt • 438pp • $22.50

DEATH OF A THOROUGHBRED

Every railbird knows the old saw about how to make a small fortune at the racetrack: Start with a large one. Ann Hagedorn Auerbach's *Wild Ride: The Rise and Tragic Fall of Calumet Farm Inc., America's Premier Racing Dynasty* can be read as a cautionary tale that demonstrates the bitter truth of that joke.

Thoroughbred racing, the so-called sport of kings, is in fact the sport of sharpers and knaves. Around the ovals, money vanishes as quickly as the hopes of a plunger on favorites when his 1-10 phenomenon snaps a fragile leg on the far turn and tumbles into the dirt. And, as the demise of Calumet shows, millionaires can lose cash just as fast as down-at-the-heels horseplayers.

Calumet was perhaps the most storied stable in the history of Kentucky's bluegrass region. Its striking Devil's-red-and-blue silks were worn by the jockeys of eight Kentucky Derby winners—two of which, Whirlaway and Citation, went on to win American racing's Triple Crown in 1941 and 1948, respectively. For more than 70 years, Calumet was a byword for consistency and quality both on the track and in the breeding shed. Today, the Calumet colors belong to a Brazilian horseman who bought them for $12,000 at auction in March, 1992, when Calumet Farm and everything on it—down to the last bridle and souvenir julep cup—were sold to pay off creditors.

Wild Ride, which recounts the origin, rise, predominance, and precipitous fall of Calumet, is a fascinating tale, with a cast of characters worthy of Dickens—or Runyon. The stable was founded in 1924 by William Monroe Wright, a miller's son and Chicago-based ace salesman who amassed one of the greatest fortunes in America after developing an improved baking powder, which he called Calumet. For Wright, who enjoyed a good horse and the thrill of a sporting wager, buying a 407-acre farm in Kentucky where he could breed and raise trotting horses seemed natural.

Wright's son and heir, Warren, was less playful. If Dad raked in the beans, Warren counted them. He designed a meticulously itemized expense form for Calumet salespeople, Auerbach reports, and then had clerks make random checks, item by paltry item. When hunting dogs at a Wright country home got loose and killed some 50 chickens, Warren had an employee peddle the fowl in the streets of Chicago. Then, Warren engineered one of the biggest mergers of the 1920s, the $32 million buyout of Calumet by Postum, one of the major deals on the way to the birth of General Foods Corp.

Squeezed out, Dad retired to Lexington to enjoy his horses; by now, he kept Thoroughbreds. And Warren, though he whined about the expense, kept Calumet going in his turn. For 60 years, the stable flourished. There were lots of winners and plenty of glory—peaking with the 1978 rivalry between Calumet's Alydar and Affirmed, Harbor View Farm's Triple Crown champion.

In 1982, though, when Calumet's imperious dowager queen, Lucille Parker Wright Markey, died, control of the farm passed to her grandchildren. Effectively, the stable was in the hands of granddaughter Cindy and her husband, J.T. Lundy, a local good ol' boy who h married the rich girl next door.

As Auerbach tells it, Lundy's gre knew no bounds. Much of the book d scribes the frenzied dealmaking a splurging he engaged in during the g go years of the 1980s. Calumet, wor $37 million when Lucille Markey die with money in the bank and no debt speak of—was pillaged, says Auerbac Lundy inflated the value of Calumet a its horses, used breeding rights to stallions as a kind of scrip, and b rowed fabulous sums from banks. A the banks happily lent: Thoroughbre were a glamour play. Dubai's Maktou brothers were setting record prices f yearlings in the auction ring, and purs were soaring. Breeding syndicates pro ised fast, huge returns. The pastur around Lexington were infected wi get-rich-quick fever, and Lundy got in the game with a vengeance.

Seasoned racetrackers have anoth adage: Scared money ways loses. As the pyr mid of notes, insuran premiums, and intere payments began to co due faster and fast Lundy scrambled as d perately as any tinhorn get even.

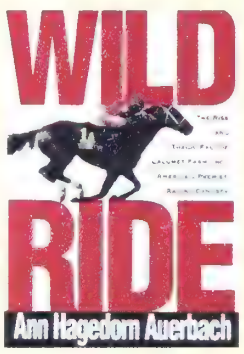
A former reporter f the *Wall Street Journ* Auerbach is nothing if n thorough in telling t tale of what she calls "t Bluegrass Bubble." S guides the reader throu the tangled thicket of c canery as well, perha as anyone could—but ten the thread is lost. part, that's because Lun left behind such a mess that a sm army of lawyers, creditors, executo and judges still can't figure out w owes what to whom or where all t money—about a third of a billion d lars—went. Finally, in '91, Lundy resign as president, and Calumet Farm, owi more than $100 million, was forced file for protection under Chapter 11.

At the 1992 auction, the Calum name and acreage—the horses had lo since been sold—were bought by Henr De Kwiatkowski, a multimillionaire Ne York aircraft broker and horseman w already had a pretty fair string of cha pions. He has promised to resto Calumet's fortunes and former glory. he does, it'll have to be without tho Devil's-red-and-blue silks.

BY CARL DESEN

Desens oversees BUSINESS WEEK sports-business coverage.

Calumet Farm was worth $37 million in '82. By '91, it was bankrupt—owing more than $100 million



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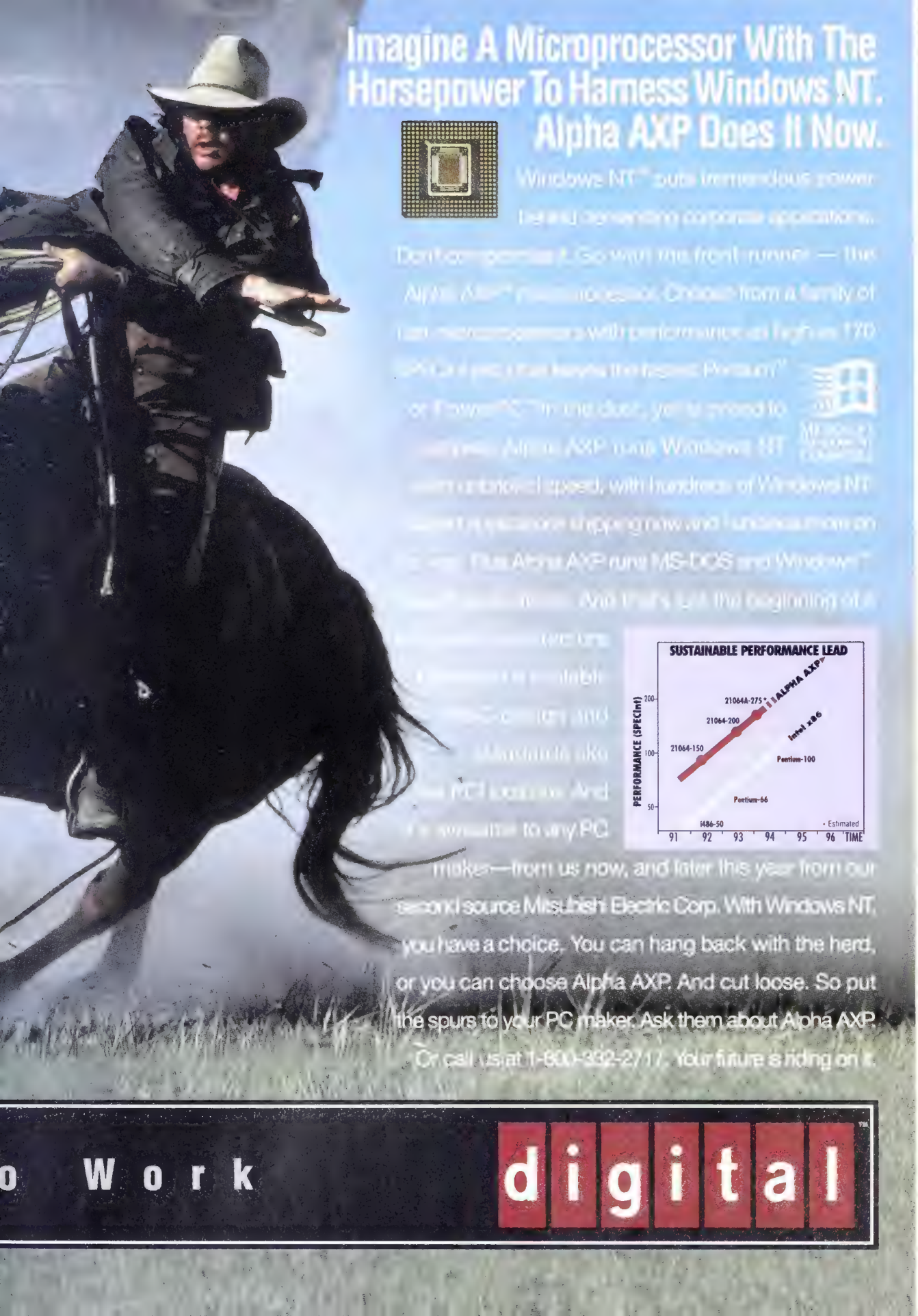
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HY CHINA IS NO PLACE OR CLINTON TO SAVE FACE

DI DORNBUSCH

Administration's
ht new idea
pplying
e sanctions just
hinese public-
or enterprises—
lousy way to
mote openness
democracy

Continuing most-favored-nation status for China is critically important for America's security, its commercial interests, and the spread of its political ideals. By June 3, President Clinton must determine on what terms China will have access to the U. S. market. If human rights performance in China is found wanting, MFN will go. If that happens, the duties levied on imports from China would rise steeply, making them much less competitive in the U. S. The average tariff on the top 20 imports would rise from 7.2% to 46.4%. On toys, for example, the rate would move from 6.8% to 70%. Such tariffs would make it easy for U. S. trading partners that do enjoy MFN status to outsell China in the U. S.

Using trade policy to push through even cosmetic changes in China's reprehensible human rights record has failed. At the risk of stiff penalties, China has refused to allow the U. S. to meddle in its internal affairs. Chinese leaders are keenly aware of America's extraordinary commercial interest in their domestic market. But they are taking a calculated risk: Clinton and his advisers can live without the Chinese better than China can live without trade access to the U. S.

Loss of the U. S. market would be a major disruption of the Chinese miracle, though not the end of it. But Clinton is intensely vulnerable on the issue because the American business community is looking to China as a vast and promising market over the next two decades—much more so than Mexico, which was much in vogue last year, or for that matter the whole of Latin America. The prospect of selling aircraft, power stations, communications systems, franchises, and more is highly enticing.

NO KOWTOWING. The debate in the Clinton Administration has already shifted—MFN yes, but not without strings. The bright new idea is to grant MFN status for the private sector but to target public-sector enterprises with selective sanctions to enforce workers' rights and human rights more generally. But the Administration has already lost the MFN showdown, so why force another fight? The prime reason is to save face for the President, who in the campaign promised not to kowtow to dictatorships.

With so little foreign-policy credibility left, and with so little chance to budge China's leadership, MFN seems a particularly unpromising place to make a stand: Lower hurdles might present better opportunities. The prospect of sanctions will stiffen Beijing's back, not break it. U. S. companies will watch China's orders going to Japan and Europe, where national leaders shirk political crusades in favor of jobs and profits.

One should not take it as gospel that an embargo on Chinese goods will force progress on human rights and democracy. Such tactics have never worked. In Cuba, investment from Spain, Mexico, and Canada is undercutting the effectiveness of U. S. sanctions. But there is a striking case in the other direction in Mexico. There, economic interaction is fostering the opening of Mexican society. The active engagement of U. S. business in the context of the North American Free Trade Agreement has pushed the Mexican political process rapidly and broadly toward democracy.

EVERYDAY DECENCY. Trade opening and modernization were the keys to an irresistible political and social maturation of Mexico. This would not have happened without the active involvement of U. S. business and government. The opening of Mexico has influenced the handling of the Chiapas conflict, the investigation of the assassination of Donaldo Colosio, and the provisions for clean and internationally monitored elections. The opening makes people take a more informed view of the standards by which they demand to be treated. In Mexico today, the middle class wants democracy and due process with such urgency and vehemence that the party bosses are eyeing the large undecided vote with apprehension.

When former President Carter was helping sell NAFTA, he urged the U. S. to move toward closer trade ties with Mexico to promote democracy there. The same argument can be made for China: With active trade and investment, China will become more outward-looking—and its political regime more at odds with the world. In the people's business dealings and in their jobs at multinational companies, they will be treated by world standards. They will quite naturally start to expect the same in the political sphere.

In everyday dealings with China, corporations must help spread a culture that is respectful of workers' rights. Such contacts will provide opportunities to show disapproval of the human rights violations of the day. The President himself should consider visiting China to demonstrate U. S. commitment to a stable and open China.

Napoleon once said: "Don't wake China, or else the world will tremble." China has awakened and must now be reckoned with. The best way to engage China is by actively interchanging goods, services, ideas, and ideals. Attempts to bend China's will by trade denial are doomed to fail: They will isolate the U. S., not China.

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BY GENE KORETZ

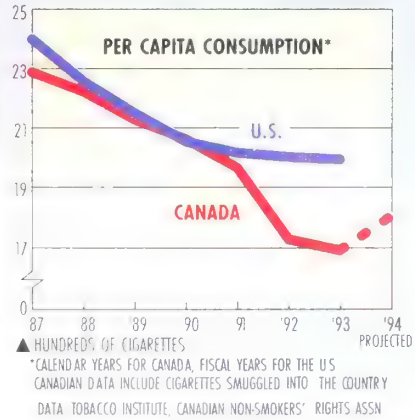
A BIG U.S. TAX HIKE SHOULD HASTEN SMOKING'S DECLINE...

Cigarette consumption in the U.S., which plunged 26% per capita between 1981 and 1990, appears to have leveled off in recent years. And while some observers attribute this to a new sybaritic attitude among Americans, economist Kenneth E. Warner of the University of Michigan is skeptical.

According to Warner, any interruption in the decline of tobacco consumption in America is "best explained as a price effect." He notes that despite the recent rash of federal and state tax increases, cigarette cost increases for many consumers have been subdued. Indeed, the Agriculture Dept. estimates that the average retail price of a pack of cigarettes in February was about 8% below its year-earlier level.

The saga of tobacco cigarette pricing in the U.S. reflects the industry's shifting strategy in the face of government efforts to discourage smoking and boost tax revenues. It's well-known that though price hikes can reduce cigarette use, the impact is less than proportionate: Economists say the price elasticity of demand is about 0.4, which means a 10% rise in the real price of smokes induces a 4% drop in consumption.

CIGARETTE CONSUMPTION: NO LONGER PLUMMETING?



In the 1970s, per capita cigarette consumption rose a bit, as producers reacted to rising health concerns and the ban on TV advertising by keeping price hikes below the rate of inflation. But when Congress moved to double the federal excise tax in 1983, the industry began to raise prices aggressively. This shift produced a hefty surge in profits. It also contributed to a 67% rise in the real price of cigarettes between 1980 and 1989 and a sharp smoking decline.

Lately, however, tobacco companies have shifted course once again. As tax hikes accelerated and smokers' resistance to high prices grew, the output of generic cigarettes has soared. Such discount smokes, which cost as little as half that of regular brands, have increased their share of the market from 15% in 1989 to about 40% last year.

All of this helps explain why Philip Morris Cos. cut the price of Marlboros last year, touching off an industrywide 20% drop in wholesale prices for regular brands. "With a big boost in federal taxes in the offing," says Warner, "companies are evidently worrying more about the impact of rising prices on demand."

...AND MIGHT STIFFEN CANADIAN PUFFERS' RESOLVE TO QUIT, TOO

Among the antismoking activists most eager for a U.S. tax hike are those in Canada. "Our cigarette-tax policy and the future health of our citizens are now hostage to decisions in Washington," declares David Sweanor of Canada's Non-Smokers' Rights Assn.

It didn't seem that way a few years ago. In the early 1980s, Canada's federal and provincial governments launched an assault on smoking with outsize tax increases that boosted retail prices by 152% in real terms from 1982 to 1992.

The results were gratifying: In that 10-year period, as cigarette-tax revenues nationwide nearly quadrupled, per capita consumption fell precipitously—38% overall and nearly 60% among teenagers.

Canada's tobacco industry, largely subsidiaries of U.S. companies, refused to roll over and play dead, however. When sales in Canada plummeted in the late 1980s, exports to the U.S. took off. And so did the flow of cigarettes smuggled back, mainly via Mohawk Indian reservations straddling the border.

Because the flavor of Canadian cigarettes doesn't appeal to Americans, there had never been much mystery about where the Canadian exports would end up. But action to raise taxes on exports was blocked by fears that the industry would move production and jobs out of Canada. By last year, smuggled smokes accounted for some 25% of Canadian consumption (and perhaps 50% in Quebec), and tax revenues were falling.

With the Liberal Party facing charges of impotence and a threat of electoral defeat in Quebec, Prime Minister Jea Chrétien slashed taxes early this yea So did 5 of Canada's 10 provinces.

The upshot is that Ottawa's tax tak is now running about 50% below yea earlier levels, even with a rise in d mestic-cigarette sales. Retail prices i Ontario and Quebec, which were do ble and triple those across the border few years ago, have declined 50% an are now below prices in Michigan an New York. And consumption is rising.

"Our hopes," says activist Sweano "now rest on a healthy tax increase b our good neighbor to the south."

IN OFFICE BUILDINGS, THEY'RE SWITCHING THE LIGHTS BACK ON

The absence of newly completed co struction projects, combined with pickup in leasing rates, is turning th long-depressed office-building mark around. Cushman & Wakefield Inc. r ports that the national vacancy rate f business districts in major cities droppe to 18.4% in the first quarter, its lowe level in nearly three years. And in th suburbs, vacancies fell to 18.3%, the lo est since 1985.

There are even sporadic signs of ne construction: Economist Robert A. Mu ray of McGraw-Hill Inc.'s F.W. Dodg Div. reports that such activity is st very low by mid-1980s standards but now able to show an occasional health gain, "at least in percentage terms."

LONGER JOB HUNTS KEEP INFLATION FROM CATCHING FIRE

Laura D'Andrea Tyson, head of th President's Council of Economic A visers, recently suggested that the nat ral rate of unemployment—the level b low which inflation pressures build— somewhere between 5.9% and 6.3% Since April's jobless rate was 6.4% that's hardly reassuring news.

Wall Street economist Peter L. Ber stein points out, however, that the ave age duration of unemployment in Apr was 19.1 weeks, or nearly five month That's up from 17.5 weeks a year ag and way above the 13-week averag reached at similar points in the expa sions following the deep recessions the early 1970s and 1980s.

In other words, "there's a lot of slac in the labor market and virtually n chance of a cost-push inflationary cycle

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luxury was enlarged as well. The dash and door panels on the Maxima GLE are now graced with beautiful woodgrain appointments. The GLE driver's seat is now electronically adjustable in eight different directions. And for your listening pleasure, the Maxima GLE offers a custom-built 6-speaker Bose® stereo system with a 32-band graphic equalizer in each speaker for amazing clarity and concert hall full balance of sound as standard equipment.

By this point, you've no doubt recognized that "new and improved" has become something of a mantra to the engineers of the new Maxima. The area of safety, of course, is no exception. The Maxima now provides its passengers with standard dual airbags, high-strength steel pipe beams in the doors, and numerous active-safety capabilities which are intended to help you avoid an accident in the first place.

*But of all these achievements, perhaps the most remarkable is that the new Maxima can still be yours for a starting price of under $20,000.**

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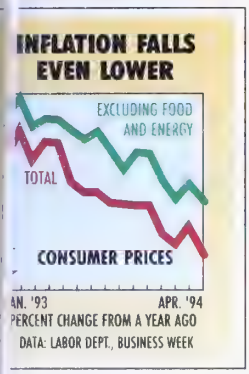
M 30, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

WHY THE FED WILL HANG UP ITS GUNS FOR A WHILE

t's called "banging the gong." That's the colorful description of a change in the Federal Reserve's discount rate, the rate banks pay when they borrow n the central bank. Since banks rarely visit the dist window, a hike in the discount rate does little to decredit. But it sends a mighty noise, accentuating the 's resolve in fighting inflation.



The Fed let out an earsplitting ring at its May 17 policy meeting, voting unanimously to boost the discount rate to 3.5%, from 3%. The federal funds rate was also lifted by half a point, to 4.25%. The Fed has raised the fed funds rate four times since Feb. 4, to its highest level since December, 1991. Faced with a higher cost of funds, commercial banks immediately boosted their me rates by half a point, to 7.25%.

When announcing the move, the central bank said its ions "substantially remove" the monetary accommodan of 1993. The interpretation: After four months of uching toward neutrality, the Fed has finally raised e inflation-adjusted fed funds rate to where it neither lps nor hinders the economy. That doesn't preclude aner move later on, but it signals that the hikes are er for now.

THUMBS UP FROM THE CREDIT MARKETS

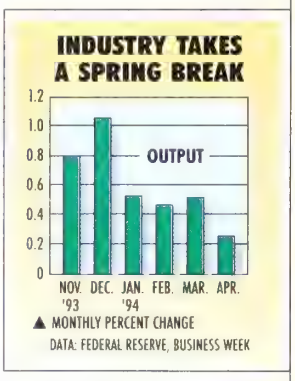
Waiting for the Fed to act was the financial markets' equivalent of pacing around a maternity ward. No recent policy move was so keenly anticipated—or so richly warded (page 34). Stock and bond prices soared after e news was released on Tuesday afternoon. By day's id, the yield on a 30-year Treasury bond fell to 7.26%, om 7.44% on May 16. And the Dow Jones industrial verage gained 49 points.

Interestingly, the hike didn't help the U. S. dollar, even ough the Fed's move was a mirror image to the half-oint slice in German interest rates taken by the Bundesank on May 11—a cut matched by other central banks. he decoupling of U. S. and European rates should buoy ie dollar. Although the Fed has not voiced any preference n exchange rates, a stronger dollar prevents inflation om being imported through higher prices for goods ade overseas.

Looking at the price data for April, though, you have to wonder what the hubbub is about (chart). Both the 0.1% drop in producer prices of finished goods and the 0.1% rise in consumer prices were better than expected. So, too, the latest news on retail sales, industrial production, and housing starts hardly points to an overheating economy.

Producer prices are actually down 0.4% from a year ago, and prices of intermediate and raw materials are about flat. At the consumer level, overall inflation is running at a 2.4% yearly pace, and the core rate—which excludes volatile food and energy prices—is just 2.7%, the slowest inflation rate in 21 years.

The first hints of price pressures are sure to show up in services. The problem for monetary policy is that demand for services is less sensitive to rising interest rates. So far, though, service inflation remains quiescent. In the first four months of 1994, core service prices are up at a 3.7% annual rate, down from their 4.2% pace in the same period of 1993.



Will service inflation slow further? Probably not, because the cost of shelter accounts for almost half of service prices. And since home values are rising in most regions, price increases for shelter have stabilized, at a 3% yearly pace. That effectively puts a floor under how low service inflation can go.

A speedup in service inflation, though, also seems unlikely in the near future. Low wage growth, plus the push for productivity, mean cost pressures aren't building in the service sector. Prices for goods show no sign of increasing, either. They're up only 0.9% from a year ago.

GROWTH IS NOT OUT OF HAND

The Fed said its moves were "designed to maintain favorable trends in inflation and thereby sustain the economic expansion." If so, then the news from the industrial sector should hearten the Fed (chart).

The data indicate that output is expanding at about a 3% annual pace this spring, well below the 7.5% gallop of the previous two quarters. Higher interest rates could slow growth a bit more in the second half of 1994. That's the Fed's goal, of course: With low rates no longer stoking demand, businesses won't be able to mark up prices.

Production at the nation's factories, mines, and utilities rose 0.3% in April, smaller than the advances of

ILL. HOFFMAN/BW

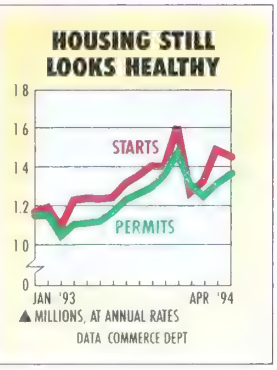
previous months. A cutback in the production of autos and light trucks accounted for some of the slowdown. Vehicle assemblies fell by 3.2%, to an annual rate of 12.2 million.

Auto makers, however, were running at full capacity in the first quarter, so the production decline was expected. Elsewhere, manufacturers of computers, tobacco, and apparel posted strong gains in April.

Industry used 83.6% of its capacity in April, unchanged from March, even with the gain in output. That's not surprising, given the stellar growth in factory productivity. Output can grow at a steady rate with little push on capacity.

CONSUMERS ARE JUST TAKING A BREATHER

Future gains in factory output will probably be smaller than in the first quarter because consumer spending is downshifting, partly in response to higher rates. The Fed tightening will likely have the greatest effect on consumers who are buying homes, but purchases of durable goods will slow, too.

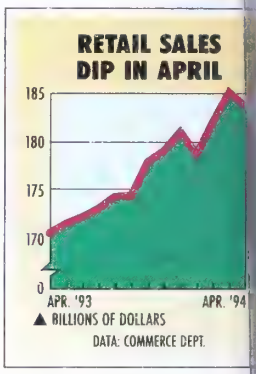


Housing isn't in trouble yet (chart). True, housing starts dropped 2.5% in April, to an annual rate of 1.45 million. However, starts in February and March were revised higher, so builders remain busy. Moreover, permits rose 4.4% in April. That's another sign that home construction will continue to be a contributor to the economy this quarter.

Of course, rates will eventually hurt. That's why the National Association of Home Builders has lowered its 1994 forecast. Instead of 1.43 million starts this year, the NAHB now expects 1.38 million homes to be built. Starts will slip to 1.37 million in 1995, the trade group says.

In addition to buying fewer homes, consumers are also likely to buy less of everything. The flood of low-rate mortgage refinancings bankrolled the yearlong spree in cars, furniture, and appliances. So a slowdown now is not unusual—or worrisome. By making credit cards and home-equity loans more expensive, the Fed is applying the brake on consumers.

Shoppers took a breather in April, but they splurged more in the winter than was first reported. Retail sales fell 0.8% last month, but the Commerce Dept. revised the February and March data much higher (chart). That's a tip-off that consumer spending added strongly to first-quarter gross domestic product.



The decline in April was widespread among retailers, so the drop was likely caused by more than just an earlier-than-usual Easter shifting of purchases into March. Even so, retail volume adjusted for price changes is well above its first-quarter level.

Fewer sales rung up in April suggest that stores may slow their ordering from factories in order to avoid excess inventory-building. Penny-watching retailers are well aware that the Fed hikes lift the cost of carrying merchandise.

It isn't surprising, then, that companies in general are cautious about their inventories. The Commerce Dept. reported that business inventories fell 0.2% in March even as sales surged 1.2%. At the March sales rate, businesses hold only 1.39 months' worth of inventory—one of the lowest inventory-sales ratios on record.

Slower inventory building will be just one credit-related drag on the economy. For the Fed, banging the gong is inflation insurance. For businesses connected to housing and durable goods, the message from the latest rate hike is ringing loud and clear: Low interest rates will no longer add lift to the U. S. economy.

THE WEEK AHEAD

DURABLE GOODS ORDERS

Wednesday, May 25, 8:30 a.m.

New orders taken by durable-goods manufacturers probably edged up by a small 0.2% in April, after a 0.8% increase in March and a 1.8% decline in February. That's the median forecast of economists surveyed by MMS International, a division of McGraw-Hill Inc. The falloff in auto and truck output last month indicates that orders for motor vehicles fell. Aircraft demand was probably weak as well. Shipments of durable goods were likely unchanged in April, after rising 0.7% in March. The small rise in new demand suggests that the backlog of unfilled orders probably fell again in April after dropping 0.1% in both February and March.

EXISTING HOME SALES

Wednesday, May 25, 8:45 a.m.

Existing homes likely sold at an annual rate of 4.15 million in April, up from their 4.06 million pace in March. Buyers are rushing to purchase homes before mortgage rates rise even higher.

GROSS DOMESTIC PRODUCT

Friday, May 27, 8:30 a.m.

The Commerce Dept.'s second look at the first-quarter economy will probably show that real GDP grew at a 2.2% annual rate instead of the 2.6% pace first reported, say the MMS economists. Higher consumer spending and homebuilding likely offset a downward refiguring in inventory accumulation. The economy jumped at a 7% clip in the fourth quarter, but growth is expected to settle down to about 3% for the next two quarters of 1994.

CORPORATE PROFITS

Friday, May 27, 8:30 a.m.

Corporate operating profits in the first quarter probably increased by about 2% from the fourth quarter. That's a steep 16% above earnings in the first quarter of 1993. Profits, which will be reported along with the revised GDP data, have been surging thanks to corporate cost-cutting and stronger demand.

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BUT WILL IT PLAY IN PEORIA?

FED TIGHTENING PLEASES THE MARKETS. CORPORATE AMERICA ISN'T SO SURE

For months, the Federal Reserve Board and the financial markets were locked in a high-stakes showdown. At the central bank, Fed Chairman Alan Greenspan had been nudging up interest rates a quarter-point a month in hopes of preempting inflation without choking the economy. But on Wall Street, inflation-phobic bond traders were revolting against Greenspan's gradualism. By bidding up yields on long-term Treasuries to the highest levels in 18 months, the markets seemed to be commanding the Fed to act boldly.

The Fed finally took up the gauntlet on May 17 with a dramatic double move. The policymaking Federal Open Market Committee agreed to boost the federal-funds rate—the cost of overnight interbank loans—by half a point, to 4.25%. And for good measure, Fed governors raised the largely symbolic, little-used discount rate that it charges banks directly for the first time in five years. That rate went up a half-point as well, to 3.5% (chart).

TRADER'S TONIC. On Wall Street, the Fed's actions lifted the cloud of uncertainty about the central bank's intentions that had loomed since the initial rate increase in February. By signaling that it had corrected an overly stimulative posture and wouldn't tighten again in the near term, the central bank prompted a deep sigh of relief throughout the markets.

By the day's end, indeed, the yield on the benchmark 30-year Treasury had plummeted to 7.26%, down from a high of 7.63% 11 days earlier. And the Dow Jones industrial average jumped 49 points, to 3721. "This is the best development the financial markets have seen in a long time," says Nicholas P. Sargen, managing director of Newark-based Global Fixed Income Advisors.

But even as the Fed made traders feel better, it heightened uncertainty in the real economy. Some corporate executives question whether the Fed is moving too aggressively to restrain an ec omy that already is showing signs slower growth and ebbing inflati They grumble that Greenspan was m concerned with satisfying bond trade and propping up a weakening dol than with keeping economic growth track. "This won't collapse the eco my, but we're concerned about a mi set that says, 'What Wall Street wan Wall Street gets,'" says Martin Regal chief economist for the U. S. Chamber Commerce.

GREENSPAN'S GAMBLE

The Fed's May 17 move was expected—but markets didn't sit still:

STOCKS Swept up in the euphoria of the bond rally, the Dow climbed 61.39 to 3732.89 by May 18.

BONDS The bond market finally got what it wanted: A significant tightening. The long-bond yield fell from 7.44 to 7.26.

CURRENCY Despite the tightening, currency traders remain worried about trade tensions. By May 18, the dollar stood at 103.5 yen and 1.6575 marks.

In truth, the Fed appears to have been half-paralyzed for months by its attempts to chart a course that kept everyone happy. Until now, some Fed officials privately had dismissed turmoil in the financial markets as hysteria. The central bank moved gradually—taking three months to raise short-term rates 75 basis points—in the belief that a cautious approach was the best way to ease economic growth from what should be a 4% plus second-quarter pace to a more sustainable 2.5% annual rate. But the Fed also expected the markets to embrace its policy of gradualism with lower long-term rates. Instead, rates soared, threatening to stall the economy.

"GOOD MOVE." So Greenspan gave Wall Street what it wanted. Cautious executives say that won't necessarily be bad for Main Street—if long rates come down for a time. "It's a good move," says Adrian T. Dillon, vice-president for planning at Eaton Corp. in Cleveland. He had been worried that Greenspan & Co. might be too slow to keep inflation in check.

But companies affected by short rates will see their bottom lines pinched. More than one-third of the $2.4 trillion in corporate loans and other debt is believed to be short-term, and commercial banks stampeded May 17 to boost their prime lending rate a half-point, to 7.25%. With many businesses unable to pass along price increases to customers, they'll have to eat the higher cost of borrowing. Higher rates also could slash corporate profits in 1995 by as much as 9%, or $22 billion, according to DRI/McGraw-Hill Inc.

Understandably, executives most nervous about the Fed's moves are those in industries sensitive to rate swings. Homebuilders have seen fixed mortgages spike to a two-year high of 8.77%, and while the bond rally—if it lasts—will mean lower rates, builders fret that it may be too late to reverse a recent slide. In April, housing starts slipped 2.5% from March to an annual rate of 1.455 million units. Higher rates "could have a dampening effect on what otherwise would be a great year," says Owensboro (Ky.) builder Tommy Thompson.

Car sales are still booming, but auto makers nevertheless worry that higher rates could spook customers. "For consumers, the psychology is, 'Am I going to have a job? Am I going to be laid off?'" says Ford Motor Co. Chairman Alexander J. Trotman. "I hope it doesn't slow us down too much."

This is where the Fed and Main Street part company. The danger, the Fed believes, is not that the economy may be weak but that it may be growing too fast. One recent concern was a strong April employment report that showed 267,000 workers were added to payrolls—even after adjusting for 74,000 Teamsters idled by a national trucking strike.

TOO TIGHT? Executives, though, steadfastly maintain that there are few signs of emerging inflation—despite the strong jobs data. Thanks to lower energy prices, producer prices are flat and consumer price inflation is running at a rate of 2.3% this year. "Greenspan's looking for inflation he can't find," says Lawrence C. Yarberry, vice-president for finance at Southern Pacific Rail Corp. "He's in danger of putting the brakes on an economy that is starting to grow and prosper." Some economists believe that's precisely what will happen. Roger Brinner, research director for DRI, estimates that the economy will slow from 3.4% this year to 1.7% in 1995.

At the White House, which expected the tightening, Administration officials made the best of Greenspan's tough medi-

cine as the right tonic for the times. "This could actually improve the economic outlook by helping to keep long-term rates down," says one senior White House aide. "There's a lot of vigor in the economy." President Clinton's economic advisers, who had urged the Fed to explain its actions more clearly to the market, were pleased by the post-rate-increase rally. "Uncertainty over what the Fed has been doing has led to higher long-term interest rates," said one official.

Is Greenspan's work done? Yes, argues Edward Yardeni, chief economist for C. J. Lawrence/Deutsche Bank Securities: "This should be the last tightening for the rest of the year." Wrong, says Michelle Laughlin, an economist at Sanwa Securities (USA) Co., who notes that Eurodollar futures prices reve that traders are still betting the feder funds rate will reach 5.75% by yearer "We'll probably see more out of t Fed," she says, "and sooner rather th later." Main Street and Wall Street bo are waiting.

By Dean Foust, with Paul Magnuss in Washington, William Glasgall in N York, and bureau reports

Commentary/by Michael Mandel

THE FED CAN'T FORGET THE '70S—BUT IT SHOULD

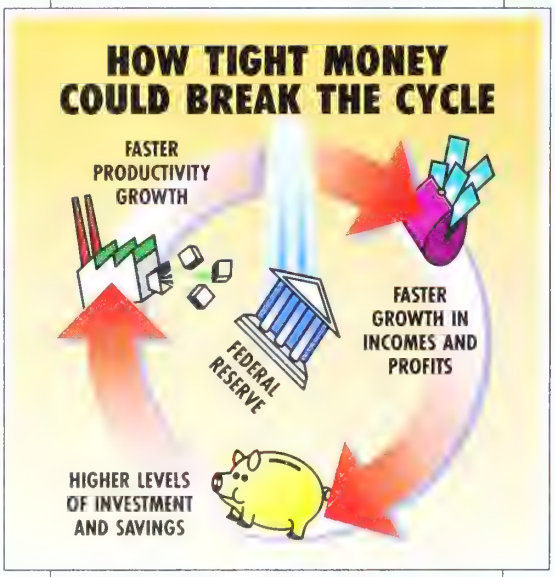
Rewind the tape to the end of 1976, as the U. S. was climbing out of a deep recession. Writing in the *Economic Report of the President*, Alan Greenspan, then head of Gerald Ford's Council of Economic Advisers, predicted that the economy could grow at 3.5% a year without triggering inflation—a view shared by most economists.

But during the next three years, policymakers received an unpleasant surprise. The economy did grow at about the expected rate—3.7% or so—but inflation skyrocketed into double digits. The culprit? An unexpected slowdown in productivity increases, which meant that the U. S. could sustain only a 2.5% growth pace without prices spiking. This misjudgment had devastating consequences: The stock and bond markets plunged, and interest rates soared. Only the sharp recessions of the early 1980s brought inflation back down.

ONCE BURNED. Fast-forward to the present. Economic policy is being made by a generation of economists that vividly remembers the danger of overestimating productivity. Alan Greenspan, of course, is chairman of the Federal Reserve. Alan S. Blinder, soon to be vice-chairman of the Fed, wrote an influential book on the policy mistakes of the 1970s. And Robert E. Rubin, chief economic aide to President Clinton, was a partner at Goldman, Sachs & Co. when the stock market dropped some 25% between 1976 and 1978.

Now, with productivity surging, these policymakers face an economic situation that's almost the exact reverse of 1976. But because of their experiences in the 1970s, they're skeptical about productivity increases and want to hold growth to a moderate 2.5%. That was the Fed's goal when it pushed up the discount rate and the federal-funds rate by 0.5% on May 17.

Moderate growth might sound appealing, but it does little to spur investment or profits. Just look at the record of the past three decades. In the years when the economy grew at a 2.5%-to-3% rate, real net business investment fell by 5% on average. But when economic growth heated up to 3% or more, investment soared by some 20%. Similarly, real corporate profits fell on average by 1% when growth was moderate, while rising by almost 11% in fast-growth years.



Moreover, excessive pessimism about rising productivity could become a self-fulfilling prophecy. If Greenspan and the Federal Reserve succeed in slowing the economy to 2.5% growth, companies will have little incentive to invest—and ultimately, investment is what drives productivity growth.

To be sure, the Fed has good reason to be wary of claims of improved productivity and lower inflation. While business productivity is up by 2.6% over the past year, these numbers ar notoriously subject to sharp revision Moreover, factories in some industrie are running near capacity, raising th threat of renewed inflation (page 37) But high capacity utilization no longe guarantees rising prices. The indus tries that are running flat-out, such a autos and industrial machinery, alsc face strong import competition, whicl will hold down increases.

JAPAN'S EDGE. Moreover, compa nies are starting to invest in new capacity, indicating that the U. S may be entering a virtuous cycle of growth, where higher produc tivity leads to rising incomes and profits, stimulating investment and savings. This, in turn, will boost productivity even more and hold down inflation. Japan, of course has sustained such a virtuous cycle for over two decades. Indeed, faster growth accounts for much of Japan's advantage in investment over the U. S. From 1970 to 1992 Japan enjoyed 18 years in which growth exceeded 3%, compared with 10 such years in the U. S. In both countries, business investment grew at an average 8% in fast-growth years: Japan just had more such years—and less inflation.

The Fed worries about giving up its gains against inflation. But an excessively tight Fed policy carries an equal risk. Americans have paid a stiff price, in the form of widespread layoffs, to push up productivity and start the virtuous cycle of growth and investment again. But much of the pain will have been wasted if Greenspan and his generation of economic policymakers remember the lessons of the 1970s too well. The U. S. may well be able to sustain faster growth without inflation—and that's what it needs.

Mandel is an economics editor.

DEARBORN, FORD SPED UP PRODUCTION TO CHURN OUT 14,000 MORE MUSTANGS A YEAR

)AY OF 'HE NIGHT SHIFT

ith plants running near full capacity, shortages of key goods are rare

t's a noise that most American manufacturers haven't heard since the late 1980s: the giddy hum of factories nning flat out. Across the nation, mak- s of everything from automobiles, el, and appliances to polyvinyl chlo- le and wallboard are running their nts at or near full capacity. Yet short- es of crucial goods are rare. The rea- n? Worldwide, plenty of unused ca- city remains. And most producers are ing everything they can—from add- g overtime to buying more supplies erseas—to squeeze out extra produc- n without having to build whole new nts.

The U. S. auto industry is a case dy of the trend. Most of the Big ree carmakers' assembly plants are rking overtime, weekends, or both. ke Ford Motor Co. The auto maker n its car plants at 110% of nonover- ne capacity in the first quarter and w is eking out more production by oiding downtime during plant change- ers. In late April, it ratcheted up the e speed at its Dearborn (Mich.) plant it can churn out an extra 14,000 new ustangs a year. Ford also will spend 5 million to boost truck-transmission oduction at its Sharonville (Ohio) facto- . And by doubling the size of its . Louis body shop, the company will ep its Aerostar vans in production ile increasing output of its hot-sell- g Explorer.

All that car-building is driving up de- and for steel. This year, the U. S. steel industry is adding net capacity for the first time in 20 years. But for now, steelmakers are meeting demand in part by importing unfinished slabs from Asia and Europe and rolling them into sheet steel in domestic mills. This allows steelmakers, currently producing at an astounding 92% of capacity, to keep most customers happy. "Deliveries are tight, and the lead times are longer, but do I have a shortage? No," says Ronald R. Schuster, a purchasing manager at General Motors Corp.

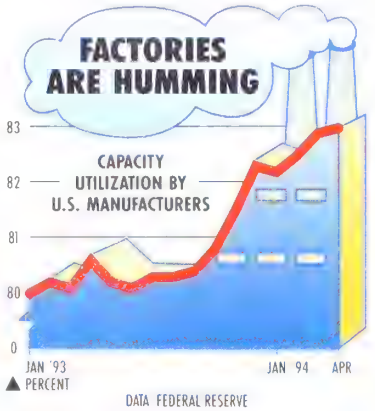
The big question now: Is U. S. industry in danger of running out of capacity? The issue is key because such a shortage could allow U. S. companies finally to begin raising prices. Despite the recovery, producer prices of finished goods have actually fallen 0.4% in the last year. Yet in the National Association of Purchasing Management's latest business survey, reported May 3, the 333 companies surveyed said only a few items—including steel sheets and castings and methanol—are really scarce.

One reason: Lots of companies are taking advantage of worldwide overcapacity to ease constraints in the U. S. Industrial parts maker Parker Hannifin Corp. has turned to underutilized plants in England and Germany to make couplings and other products. "We've never done that before," says Executive Vice-President Dennis W. Sullivan. It's happening now because Parker reorganized so that the same managers run its product lines for Europe and North America, giving the company more flexibility in using its capacity.

Tiremakers, too, are on a new tack. Michelin and Bridgestone/Firestone Inc., both stretched for product, are taking the unusual step of buying tires from competitors who aren't so busy. Among other measures, Bridgestone/Firestone also has liberalized its distribution policies in order to get tires to dealers more quickly. Yet the tiremaker expects back orders to continue through the rest of the year.

STAGNANT PRICES. Of course, some industries—especially those that lack overseas competition—are seeing shortages. "There are definitely spot shortages of wallboard," says Laurence E. Hirsch, CEO of homebuilder Centex Corp., which produces the material through its 49%-owned Centex Construction Products Inc. Strong construction and the lack of capacity additions in the industry have driven prices up 34% in two years, to $90 per 1,000 square feet. U. S. Gypsum Co. will spend $90 million to increase its capacity 10% over the next year.

Capital spending overall has picked up. But fierce price competition means some companies can't rationalize new investments yet. Although Monsanto Co.'s chemical group operated at an 83% rate in the first quarter, up 4 points from a year earlier, it has little flexibility to raise prices, says a spokesman. S. G. Warburg & Co. analyst Paul Raman argues that capacity constraints may soon be a problem in some chemicals, such as phenol and PVC. But he says prices must rise 15% to justify building plants.



In many other industries, prices are likely to stay low, too. Robert A. Bretz, the director of corporate purchasing at Pitney Bowes Inc. who oversaw the last NAPM survey, notes that customers throughout the supply chain are still resisting price increases. The upshot: U. S. manufacturers will be adding more capacity as the recovery unfolds. But they're playing it conservatively, hoping they can avoid gluts when the good times come to an end.

By Zachary Schiller in Cleveland, with James B. Treece in Detroit, Stephen Baker in Pittsburgh, and bureau reports

MEGA CLOUT: HOW AN EDS-SPRINT COMBINATION WOULD LOOK

EDS'S ALBERTHAL

REVENUE	MARKET VALUE
$20 billion	$30 billion
NET INCOME	**EMPLOYEES**
$1.4 billion*	120,000

SYNERGIES With a merger, EDS could offer discounted telecom-based services and expand its reach in the multimedia market. Sprint, meanwhile, would gain entree to the corporate market.

*Excludes nonrecurring charges at Sprint

SPRINT'S ESREY

EAT YOUR HEART OUT, ROSS PEROT

EDS-Sprint would be an instant powerhouse, tempting rivals to team up

When phone company Centel Corp. sold out to Sprint Corp. for $3 billion in 1992, John P. Frazee Jr., the company's chief executive at the time, thought he was entering a "marriage of equals." Things didn't work out that way. While it was understood that Sprint's hard-charging William T. Esrey would keep the top spot, Frazee says strategic and operational differences prompted him to quit the combined company after only five months. "It didn't turn out like I thought," says Frazee, declining to elaborate. He now raises horses and cattle in Florida.

As Sprint ponders another "merger of equals"—this one with Electronic Data Systems Corp. of Plano, Tex.—the message is clear: Watch out, pardners! If it works, the Sprint/EDS combination would create a $20 billion behemoth. In the process, it would rewrite the rules of the fast-growing information-services game. And the combo could make Sprint, the lagging No. 3 long-distance carrier, a far more formidable rival to AT&T, MCI, and other telecom outfits.

But, man oh man, would such a deal be hard to pull off. Aborted partnerships by Bell Atlantic, TCI, Cox Enterprises, and Southwestern Bell have shown that big technology ventures are tough to cement. And this is a deal fraught with strong corporate cultures and shifting technology. Adding to the peril, leaks forced the two companies on May 16 to prematurely announce their talks, before agreeing on a deal or its valuation. Meanwhile, EDS must clear complex regulatory hurdles to untangle itself from parent General Motors Corp.

Why even try? For one thing, contends an executive involved in the deal: "Neither company is equipped to go it alone. There must be a strategic alliance, if not a merger, for them to compete against the IBMs and AT&Ts." Moreover, Sprint and EDS expect to reap huge immediate cost savings from a merger. EDS is expected to turn over its vast private telecommunications network to Sprint, and Sprint is likely to give its data processing operations to EDS. Longer-term, they see a big new market in multimedia and interactive services, boosted by Sprint's brand name and access to millions of consumers. EDS already is dabbling in home shopping, home banking, and video-on-demand.

HEAVY LIFTING. But major obstacles remain. For one, who would run the merged company? EDS, founded by Ross Perot, and Sprint are both known for their buttoned-down, hard-charging ways. EDS CEO Lester M. Alberthal Jr., 50, the native Texan and 26-year company veteran who took the helm in 1986, has insisted he has no interest in tradi one owner for another. Based on pe formance, Alberthal may have t stronger case for the top job. Under h leadership, EDS's earnings have increas at a double-digit clip. And he has cu EDS's reliance on GM by signing hu outsourcing deals, including a recent billion-$4 billion contract with Xer Corp. GM accounted for 39% of EDS $8.6 billion in revenues last year, dow from 59% in 1988.

Yet, Esrey, 54, a weightlifter ar mountain climber, is used to running h own show—alone and has employe catchy marketing and heavy networ investments to build Sprint up into recognizable name. But he has been cr icized for zig-zagging between two co tradictory goals: increasing Sprint's ma ket share and improving its profits. I the meantime, Sprint's share of the U. long-distance market has increased ju half a point, to 9.4%, since 1989—whi MCI's has jumped a full seven points, t 20%, in the same period.

Still, the potential payo from a merger is tantali ing. Take the benefits t Sprint of becoming involve in EDS's big outsourcin deals. EDS typically take over management of a com pany's network as well a its data center, which would give Sprir a huge chunk of business. And Sprint o fers EDS the networking skills deman ed by EDS's customers. "The lines ar blurring between data processing an telecommunications," says Charles S Feld, acting chief information officer a Burlington Northern Inc. "The mor [companies] combine and are able to pu together end-to-end offerings, the easie for us to get the work done."

Even if an outright merger wit Sprint should prove unattainable, Yanke

oup Managing Director Howard Anrson still sees huge potential for the o. He figures Sprint will sign a $6.4 lion, 10-year contract with EDS to han- billing and other operations. Ander- also expects EDS to turn its private twork over to Sprint in a pact worth ne $3 billion. Eventually, Anderson pects the two to form a multimedia nt venture and perhaps to swap stock. Of course, EDS has taken other tele- n partners to the dance before and come home alone. Last year, talks with British Telecommunications foundered on issues of control and price. But this time, EDS and Sprint insist that GM, which bought EDS in 1984 for $2.6 billion, can clear regulatory hurdles that hobbled past EDS alliances. "We have a high level of confidence we can solve the issues," says Ronald LeMay, who heads Sprint's long-distance business.

Despite the potential for failure, the possibility of an EDS-Sprint combination already is sending tremors through the computer and communications industries, prompting speculation about a wave of alliances. "It puts pressure on us to have our own network strategies and alliances," says Greg M. Jacobsen, executive vice-president of Canada's SHL Systemhouse Inc. If, that is, the big egos involved can pull the thing off.

By Wendy Zellner in Dallas, with Mark Lewyn in Washington, Richard A. Melcher in Chicago, and bureau reports

Commentary/by John W. Verity

THE EDS-SPRINT MERGER: HISTORY IS NOT ON THEIR SIDE

o merge or not to merge—that is the question. Whether 'tis better to pursue digital convergence as n independent player, allying oneself ith partners only as needed—or to uy, or be bought, in hopes of reaping aximum "synergy."

It ain't poetry, but in essence that's hat's on the mind of every chief exective in the computer and communicaons industries. Those at Electronic ata Systems Corp. (EDS) id Sprint Corp. are talking erger, apparently because ey figure it's the best way leverage their expertise id move into potentially ge future markets. Unfor- nately, history is not on eir side: The path is lit- red with unfruitful mergers between mputer and communications outfits.

Evidently, it's easy to misread the a leaves in these closely linked t quite dissimilar industries. In e early '80s, for instance, AT&T ught to sell computers, and IBM lped launch a communications tellite. Talk mounted of a ash as titanic as King ong vs. Godzilla.

RITICAL MESS. And the cross-industry ergers began: A flush M bought into MCI, the ng-distance telephone mpany, and gobbled Rolm, a maker of office telephone vitches. Wang Laboratories took over tecom, a Rolm competitor. Tandem omputers and Unisys each picked up twork equipment companies. AT&T ught into Sun Microsystems and Conergent Technologies, two computer akers. The deals went on, reaching a escendo of sorts in 1991 with AT&T's stile, $7.6 billion takeover of NCR.

Looking back, it's difficult to identi- many maneuvers that yielded a strong payoff—in profits, market share, or any other quantifiable measure. IBM had to dump both its Rolm and MCI investments, Wang's troubles are well-documented, and AT&T has yet to prove the wisdom of its acquisition.

Clearly, computers depend more each day on communications networks, just as those networks depend more on computers. But as compelling as they may be, such technological overlaps haven't overcome deep cultural and marketing differences: Traditionally, for instance, computer and telephone salespeople would call on separate clients at the same customer site, using mutually unintelligible buzzwords.

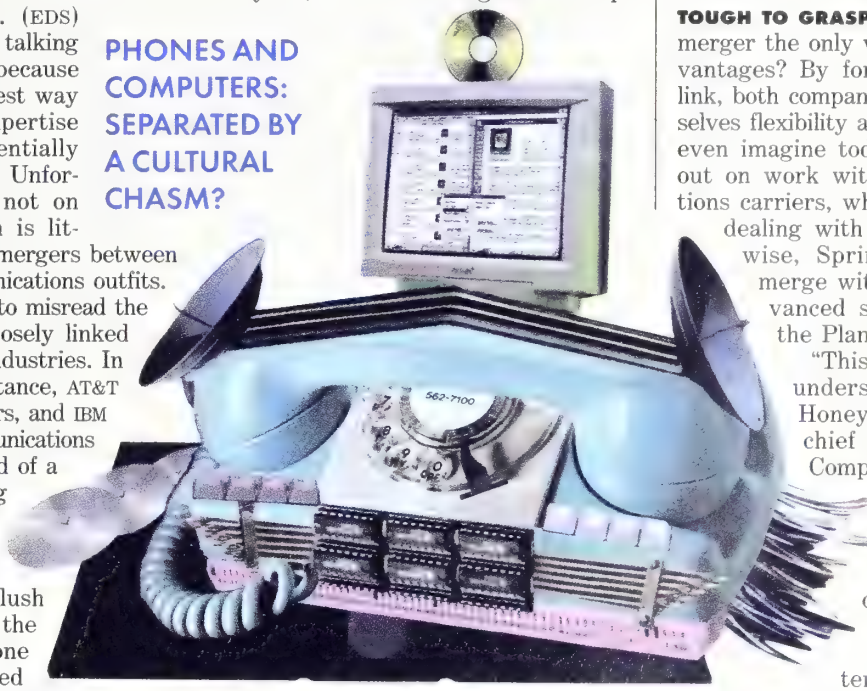
EDS and Sprint may have it easier. "We've had 10 years to build maturity," says consultant Peter C. Janca. Computer and communications suppliers "have a better idea about what they can do and cannot do together." As service companies, EDS and Sprint won't have the problem of self-interested manufacturing organizations. Indeed, their skills appear complementary: EDS could help Sprint make its bill processing and other back-office operations more efficient while also creating the software Sprint will need to make its network more "intelligent." And Sprint could help EDS operate and maintain customers' information networks.

TOUGH TO GRASP. But is a full-blown merger the only way to reap such advantages? By forging such a link, both companies could deny themselves flexibility and options they can't even imagine today. EDS might miss out on work with other communications carriers, which will be chary of dealing with a competitor. Likewise, Sprint doesn't have to merge with EDS to get its advanced software written by the Plano (Tex.) giant.

"This deal is difficult to understand," says Van B. Honeycutt, president and chief operating officer of Computer Sciences Corp., a major EDS competitor. "What's really driving this? Is it GM cashing out? Or did some strategist sit down and figure it out? I tend to think it's the cashing out scenario that's the strong motivator."

So far, executives at the two potential partners have kept their thinking about such issues to themselves. And until they figure out if the two companies can work together as one, they'll have to keep suffering the slings and arrows of outrageous speculation.

Verity is BW's information processing editor.



PHONES AND COMPUTERS: SEPARATED BY A CULTURAL CHASM?

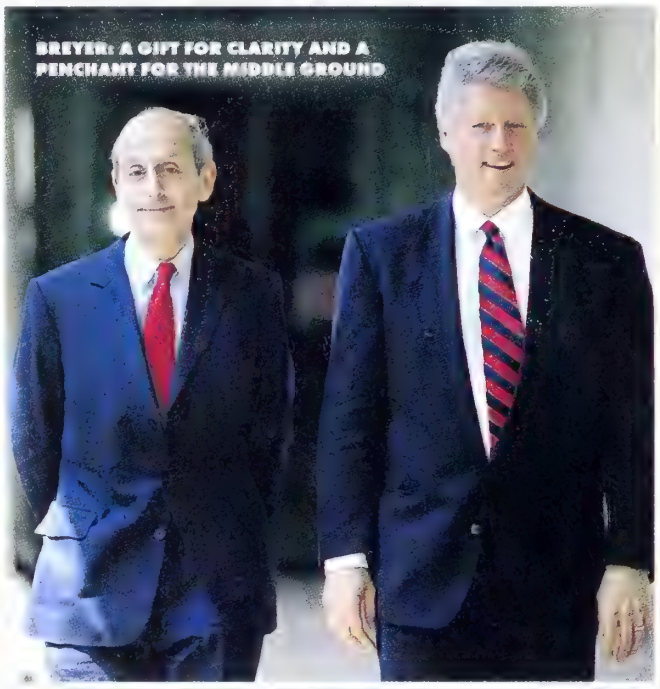
THE COURT

BUSINESS HAS AN *AMICUS* IN STEPHEN BREYER

The Supreme Court nominee is wary of rules and regulation

On the surface, Stephen G. Breyer and Lewis F. Powell Jr. couldn't be more different. Breyer, a U.S. Appeals Court judge with Democratic ties, jogs to work in high-top sneakers and V-neck undershirts. He revels in plotting routes to maximize his frequent-flier miles—a byproduct of the airline deregulation he helped fashion as a Senate aide. Powell, by contrast, was a buttoned-down, Republican corporate lawyer when he joined the Supreme Court in 1972.

But when President Clinton nominated Breyer for the high court on May 13, he gave the 56-year-old former Harvard Law School professor the chance to become Powell's intellectual heir. Like the retired justice, Breyer has an appetite for business cases. He "simply doesn't see them as that daunting," says Ed Dailey, general counsel for Blue Cross & Blue Shield of Massachusetts Inc. If Breyer is confirmed, as is expected, he could help clarify the court's often confusing business rulings.



BREYER: A GIFT FOR CLARITY AND A PENCHANT FOR THE MIDDLE GROUND

COSTLY SLUDGE. Breyer would bring a New Democrat's vision to these issues. He is skeptical of government interference in markets and sympathetic to defendants in antitrust cases. In a 1993 book, for instance, he criticized hazardous-waste rules for petroleum sludge that cost $27.6 million per life saved and asbestos protections that cost $74 million per victim. "Breyer is a liberal who respects markets and the dangers of command-and-control" regulations, says Akhil R. Amar, a Yale Law School professor and former Breyer clerk. That upsets some Democrats. "He thinks the average individual doesn't need [the government's] protection," complains Senator Howard M. Metzenbaum (D-Ohio).

Despite his skepticism about regulations, Breyer won't reject them willy-nilly. A moderate, he believes judges should defer to Congress when interpreting laws. And unlike conservative Justice Antonin Scalia, who focuses exclusively on the text of statutes to discern lawmakers' wishes, Breyer would give weight to debates that shape the drafting of laws. "Breyer is the leading antagonist to Scalia," says Joel I. Klein, White House deputy counsel.

But where Congress wants to give judges leeway, in areas such as antitrust law, Breyer may inject his views. Consider a suit filed by Massachusetts doctors against Blue Shield over an arrangement they thought violated antitrust law. Blue Shield banned physicians whose fees exceeded the insurer's reimbursement from charging patients the difference. The doctors said they had no choice because Blue Shield covered most of the patients in the state. But Breyer ruled in 1984 that the insurer was simply a buyer free to set prices with sellers.

Indeed, Breyer could prove an obstacle to Justice Dept. antitrust chief Anne K. Bingaman. "Bingaman must be careful, because this is not a favorable environment for expansive antitrust initiatives," says William E. Kovacic, George Mason University antitrust specialist. At the same time, though, Breyer is likely to bring some consistency to what experts see as the court's vacillation in this area. In a 1992 case, for instance, the justices said that in refusing to sell parts to independent companies that service its products, defendant Eastman Kodak Co. may have violated antitrust rules. But a year later, they ruled in favor of a cigarette maker accused of predatory pricing because there was no evidence the scheme slowed its competitor's business.

SENTENCING COMPROMISE. Count on Breyer's pragmatism—which helps him forge consensus—to surface quickly. That trait was evident during his tenure in the late 1980s on the U.S. Sentencing Commission, which devised uniform penalties for a variety of crimes. Judges were upset at losing power, while other experts disagreed on how to design fitting punishments for every crime. Breyer won over all sides by coming up with an approach based on past sentences actually imposed by judges.

Breyer's associates believe that the knack for finding the middle ground could ultimately be the judge's greatest contribution to the court. After years of legal battles pitting Reaganite conservatives against the court's moderate and dwindling band of liberals, a bit of serenity may be just what the high court needs.

By Catherine Yang in Washington

BREYER ON BUSINESS

ANTITRUST Breyer leans toward competition over antitrust enforcement. In a 1983 case, he ruled against a company's claim that a competitor was trying to drive it out of business with predatory price breaks. Breyer said the prices weren't predatory because they were above cost.

ENVIRONMENTAL REGULATION The judge is sympathetic to environmental protection. He ordered the feds in 1983 to back off oil-drilling plans in the North Atlantic, ruling that they had failed to draw up a responsible environmental impact statement.

EMPLOYMENT DISCRIMINATION Breyer is unlikely to push the bounds of antibias laws. In 1989, he ruled against a female professor who failed to get a Brown University professorship.

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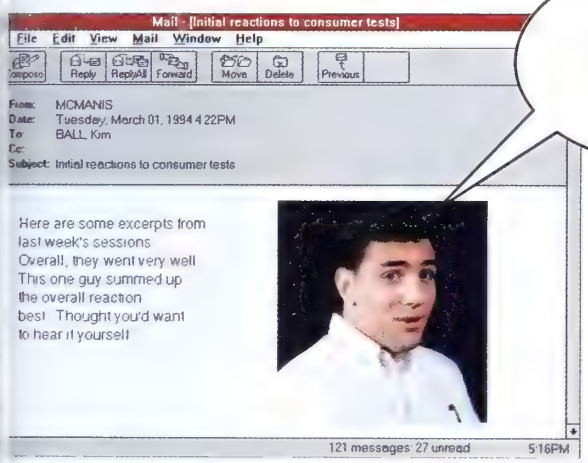

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SCANDALS

BITTER FRUIT IN ORANGE COUNTY

The SEC is pursuing one of the largest real estate pyramids ever

John Seymour didn't think to question where the money would come from. Seymour, a real estate broker who would later become the mayor of Anaheim, Calif., and briefly a U.S. senator, needed to sell his business to turn to politics.

Enter William E. Cooper, a loan broker who had struck it rich riding Orange County's real estate boom in the late '70s and was making the rounds at Republican fundraisers. "He was up front, a fine guy to deal with," Seymour recalls. In 1981, Cooper agreed to buy the business for $720,000. But soon, the checks stopped coming in, and Seymour sued. The two settled for $100,000.

For Cooper, the incident appears to have been a dress rehearsal of sorts. Over the next 13 years, the Securities & Exchange Commission charges, he and two associates operated what may have been the largest real estate pyramid ever in a region rife with investor scams. The regulators allege that the trio's First Pension Corp. and its subsidiaries bilked investors out of as much as $124 million by selling shares in limited partnerships promising returns approaching 28%—from property investments that were never made.

SINGAPORE STASH. Cooper, 49, and his partners, Robert E. Lindley and Valerie Jensen, won't comment directly on the case but say through their attorneys that they intend to cooperate with federal authorities, who filed a complaint on May 13 in Los Angeles federal court. "Mr. Cooper profoundly regrets any losses that may have occurred to investors," says his attorney, former federal Judge Robert C. Bonner. Just how much was lost may never be known: Officials say the Federal Bureau of Investigation is examining the flow of some of the money to Singapore and other countries. The Justice Dept. may soon file criminal charges.

At the center of the probe is a jovial, bearded man who started in the mortgage business as an 18-year-old loan-officer trainee and by the late '70s operated his own loan-brokerage agency. As the real estate market boomed, Cooper became well known among Orange County's monied set. A former board chairman for a local hospital, he and his wife, Terri, were fund-raisers for a local children's home. He was appointed by then-California Governor George Deukmejian in '84 to the board of the California Economic Development Corp., a nonprofit agency studying the state's economy.

By then, the SEC alleges, Cooper, Lindley, and Jensen had already planted the seeds of their scam. Selling units in 218 separate limited partnerships that promised to buy mortgages at steep discounts, brokers at First Pension's VestCorp Securities Corp. subsidiary raised an estimated $99 million. "It all looked so perfect, so neat and clean," fumes retired insurance-company inspector John Keeler, who invested nearly $8,000. Colorful brochures arrived frequently, says Keeler. For a while, so did dividend checks.

The problem, the SEC now says, was that the dividends Keeler received were coming not from investments but fro other units that VestCorp sold. In fa says SEC Assistant Regional Direct Lisa A. Gok: "we're not even sure the were any investments." Instead, the S charges, First Pension maintained a s cret account called the "99 minifun" that it used to funnel $2.1 million "dividends" from one investor to anoth At the same time, the SEC maintain $25 million was diverted to a Scottsda (Ariz.) brokerage house, Ernest-Edwar & Associates. Gok says it was litt more than a mail drop for the funds.

SLEIGHT OF HAND. The scheme began unravel earlier this year, according to vestigators. In early 1993, the trio four ed Denver-based Summit Trust Co. act as custodian for the funds raised First Pension and VestCorp. But a ye later—last April—Summit President Ke neth Lyon notified Colorado banking re ulators that at least $10 million had be siphoned out of the bank without h knowledge.

SEC regulators now believe that Coo er, forging Lyon's signature, wrote 1 checks totaling $1.3 million and depos ed them into Wells Fargo Bank accoun in the name of two other Cooper-co trolled companies. At least 50 chec from investors were never even deposi ed with Summit, the SEC charges, b were instead funneled into accounts co trolled by Cooper and Lindley. Lyon d not return phone calls.

Summit has been seized by Colorad regulators, and First Pension has file for Chapter 7 bankruptcy. SEC official who have petitioned the court to a point auditors to pore over First Pe sion's books, say at least $225 millio in other First Pension investments, unr lated to the partnerships, are consi ered secure. That's little comfort to th thousands of other investors who soug Orange County riches and instead ma have bought themselves a scam.

By Ronald Grover in Los Angele

THE SEC'S CASE AGAINST FIRST PENSION

MAY 1981 TO APRIL 1994

VestCorp, 75% owned by William Cooper and two partners, raises $99 million through 218 limited partnerships—ostensibly, to invest in real estate.

1988

Cooper-controlled First Pension, which controls $67 million of VestCorp assets, starts distributing $2.1 million in dividends to VestCorp clients—even though the partnerships are generating no income.

1990

First Pension deposits investor funds in two custodial accounts. Two years later, it begins diverting approximately $25 million from the accounts to Ernest-Edwards & Associates, a Scottsdale brokerage company controlled by Cooper. In February, 1993, Cooper and his associates form Summit Trust, which becomes custodian for all First Pension accounts.

DATA: SECURITIES & EXCHANGE COMMISSION COMPLAINT

APRIL, 1994

Cooper writes checks for $1.3 million on Summit accounts, then deposits them in other accounts he controls. Another $440,0 is put in an account held by Cooper's secretary.

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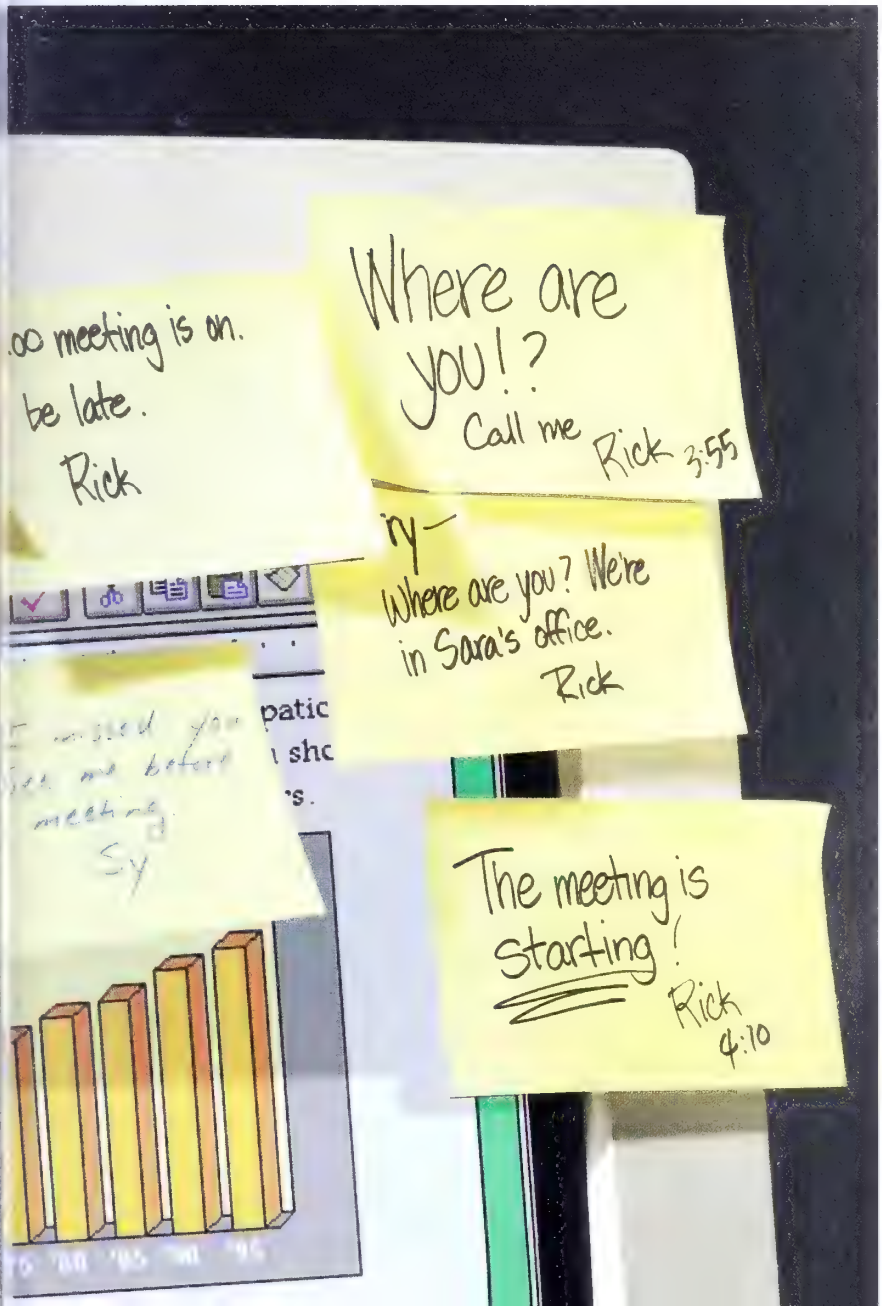

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REGULATION

BATTLEGROUND: ROCHESTER

At last, the phone and cable war is set to start

Been wondering what happened to the long-predicted battle between telephone companies and cable-TV operators over local phone service? Wonder no longer.

A groundbreaking agreement involving Rochester Telephone Corp., Time Warner Inc., and the New York Public Service Commission on May 17 would allow Time Warner's local cable unit to offer phone service starting next year in the Rochester (N.Y.) area, which has about 500,000 phone customers. Other companies also could compete.

Under the deal, expected to be finalized this fall, Rochester Tel gets a significant loosening of regulatory restrictions. It agreed to a 10% rate cut, followed by a seven-year freeze in rates in exchange for an end to New York's "rate of return" regulation, which limits the company to a return on equity of about 10.8%. If Rochester Tel can wring cost savings out of its network, it will get to keep the additional profit.

MODEL DEAL. Other states may use the Rochester pact as a blueprint for their own deregulatory actions. In Illinois, local phone operator Ameritech Corp. has proposed a similar opening of its local monopoly. One wrinkle in its plan: It wants to be allowed into the long-distance phone business as a quid pro quo—which would require federal action.

The experience in Britain, where cable companies have been competing for phone customers since 1991, indicates that cable operators may do well. Offering service for 15% to 20% less than British Telecommunications PLC, cable companies have hooked up 375,000 phone customers so far and predict they'll have 650,000 total by yearend.

But Time Warner may have trouble making a profit in Rochester. Well-managed Rochester Tel's rates are low: Basic local service costs $12.96 a month. Paul B. Jones, a Time Warner Communications senior vice-president, won't say if his company will undercut Rochester Tel's prices. He does say Time Warner hopes to sell phone-and-cable service in a single package. Quite a concept: Chat with your pals and watch Beavis and Butt-head—all on the same bill.

By Mark Maremont in Boston

STATE GOVERNMENT

A '93 GAGGLE OF GOVERNORS: CLINTON MUST DEFEND WHAT HE ONCE RAILED AGAINST

GETTING STUCK WITH THE CHECK

Federal mandates to fund programs have cities and states screaming

Philadelphia Mayor Edward G. Rendell used to be a prosecutor. But two years ago, he was so angry he almost became a lawbreaker. Washington wanted him to pay for a new $500 million wastewater-treatment plant to protect fish in the Delaware River. But Rendell argued that the existing plant was just fine—and pointed out that the fish weren't dying. "I told them, 'I'm simply not going to do it, and you can put me in jail before I go along,'" Rendell recalls. The feds are reexamining their position.

Multiply the mayor's war story hundreds of times, and you can see why the Clinton Administration and Congress face an insurrection outside the Beltway. Furious state and local officials are demanding that Congress stop passing so many programs that must be financed by localities with no help from Washington. And they're getting results. On May 26, a Senate panel chaired by Senator John Glenn (D-Ohio) is expected to vote on a bill that would make it harder for the feds to push program costs onto localities.

Mayors and governors contend that unfunded mandates are destroying their right to set priorities. Ohio Governor George V. Voinovich, for one, complains that a law requiring that rubberized asphalt be used in paving highways cost his state $50 million. All told, the U.S. Conference of Mayors last year found that 10 federal mandates ate up 11% of city budgets. "Something is wrong when you have to enforce pooper-scooper laws but you can't afford the cops to enfor drug laws," says Rutland (Vt.) May Jeffrey N. Wennberg.

The groundswell for change has pr duced curious politics on Capitol H Republicans, who want to pare gover ment programs, first waved the banne A bill introduced by Senator Dirk Kem thorne (R-Idaho) would force Congre to back new laws with cash. But no Democrats, who look at mandates as way to finance social programs, a jumping in. They're facing pressure fr local officials threatening payback election time. But they hope to modi Kempthorne's draconian approach.

"LEGITIMATE CONCERN." For Preside Clinton—who railed against mandates governor of Arkansas—the furor is a h awkward. Last October, he signed executive order that would bar feder agencies from imposing unfunded rul on the states—unless the law passed b Congress permits it. Sally Katzen, a se ior official at the White House Office Management & Budget, says Clinton order has already prompted agencies issue rules that make it easier for stat to comply. And, she says, the Admini tration is pushing Congress to relax son laws coming up for reauthorization.

But Katzen says there are limits o how far Washington can pull back. Sh shares some of the worries of group that warn that the antimandate mov ment could derail dozens of popula laws. "There is a legitimate concern th people should have clean water an clean air and reasonable access to publ places," she says. "These are issues tha lend themselves to national standards."

As long as budgets are tight and s cial demands keep rising, it's unlikel that this game of intergovernmenta chicken will end. And that could mea that more mayors such as Rendell wi be willing to risk some jail time—at th feds' expense, of course.

By Susan B. Garland in Washingto

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DRUGS

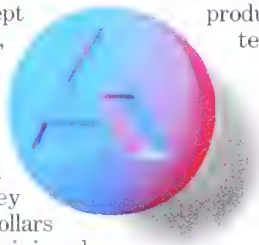
RU-486'S ROUGH CROSSING

In the U.S., the abortion pill has political liabilities and weak demand

In 1988, it revitalized the copper intrauterine device. It paved the way for the introduction three years later of the Norplant contraceptive implant. Now, the Population Council, the nonprofit bastion of American birth control, faces its toughest challenge yet: selling the RU-486 abortion pill.

On May 16, French drugmaker Roussel Uclaf agreed to donate U. S. patent rights and technology for RU-486, which chemically induces miscarriages, to the New York-based council. The pact came with some high-level support: The Clinton Administration had pressed Roussel to free up the drug. The Food & Drug Administration now will help the council start clinical trials. Commercialization may come by 1996, a council spokeswoman says. Supporters such as Representative Ron Wyden (D-Ore.) are ecstatic: "The days of stalling are over," he says.

Exactly how the council will sell RU-486, though, isn't known. Big U. S. producers have steered clear of the drug, fearing boycotts by antiabortion groups. That concern is what kept Roussel Uclaf out of the U. S., even though it already sells RU-486 in Europe.



The council has coped with such reluctance before. In the 1980s, big companies were loath to sell IUDs in the U. S.; they were shaken by the billions of dollars in liability claims paid women injured by faulty IUDs made by A. H. Robins Co., among others. The council found GynoPharma Inc., a recently organized startup, to market the device. Now, GynoPharma has a profitable $25 million-a-year business in IUDs.

"MORNING AFTER" PILL. The council may now locate another small producer with no vulnerable consumer products and says that it is talking to a dozen candidates. The problem: Demand for the abortion drug isn't likely to be large, because current surgical methods are less complicated and less painful. Roderick L. Mackenzie, GynoPharma's chai man, figures the immediate U. S. mark for RU-486 may not be more than $ million annually. He says the drug cou capture some 100,000 of the 1.6 milli abortions done yearly in the U. S., $100 a treatment. But a factory produce RU-486 could itself co tens of millions of dollars.

Some advocates say t drug's real commerci potential lies beyo abortions. Already, r searchers are examini its effectiveness in trea ing breast and brain ca cer. Another use, as "morning after" pill for contraceptiv slipups, could "change the [financial] ri profile substantially," says one healt care venture capitalist.

In any case, the council has the wher withal to take its time. Established 1952 by philanthropist John D. Rock feller III, it raised enough from gover ments and private foundations to cover $49 million budget this year. Findir RU-486 a corporate parent, though, w take more creativity than cash.

By Joseph Weber in Philadelphia, wi John Carey in Washington

MARKETING

WILL A/X GET THE AX?

"Low-cost" boutiques are an embarrassment for Giorgio Armani

When it came to fashion statements, no one made them better than Milanese superstar Giorgio Armani. His sleek, understated designs transformed a storefront operation into one of the most successful fashion empires of this century.

But even fashion geniuses slip up—and Armani now must explain more than $100 million in losses at Simint, the parent to his "low-cost" A/X: Armani Exchange boutiques in the U. S. Launched in early 1992, A/X aimed to challenge such giants as Gap and The Limited Inc. If Armani could get shoppers to fork over $2,000 for a man's suit, the theory went, he would have no problem with T-shirts and jeans.

Sorry, Giorgio. Shoppers stayed away in droves. Although the 35 trendy boutiques are located in such high-fashion locations as New York's Soho and Beverly Hills, high prices for basic clothes have turned off would-be buyers. A/X T-shirts start at $26, compared with $10.50 at Gap; jeans fetch up to $68. "Just putting the Armani logo on a T-shirt is not enough," says Jon Weiser, president of Charivari, an upscale New York fashion retailer.

OFF THE RACK: LOGOS AREN'T ENOUGH TO PULL IN SHOPPERS

SIZZLING. The debacle further tarnishes Armani's image as a fashion wizard. After Simint's books were audited in early May, Milan's stock exchange suspended trading in the company, which also manufactures Armani jeans. Then, in mid-May, Simint officials announced losses of $115 million for the first ten months of the past financial year.

Just a few years ago, Simint seemed a sizzling European fashion play: Under Armani and Milanese financier Francesco Micheli, Simint racke up $220 million sales by 1992. But l last year, U. S. sal were slumping. Luc Ramella, Simint's CE left without explan tion in October. F February, Micheli w out, too, selling h stake to Armar Simint stock traded barely one-quarter i 1990 levels.

Simint officials fau Ramella and Miche for mismanaging A/ and say a suit holding the two respons ble for the chain's losses is likely. M cheli says he's not to blame and that, any case, Armani knew about the pro lems. He also faults Armani for takin some $100 million in royalties fro Simint while the company was barel breaking even over the past three four years. Armani refuses to commen

Meanwhile, bankers close to Simi say it's low on cash. One possible sol tion, advisers say: a sale of the U. S operations to Singapore businessma Ong Beng Seng, a distributor of Arma fashions in the Far East who recentl bought into Simint. Perhaps Seng ca figure out how to sell a $26 T-shirt.

By John Rossant in Rom

n Business This Week

TED BY KEITH H. HAMMONDS

&W WANTS ITS MOKING GUN BACK

erious damage control in the tobacco industry: BAT dustries' Brown & illiamson Tobacco on May served subpoenas seeking review copies of internal -year-old documents. The sty papers allegedly contain idence that B&W officials ac-owledged and conspired to ver up their own research owing adverse health ef-ts of tobacco and the ad-tiveness of nicotine. That's y Henry Waxman is so in-ested. The California con-essman, ignoring B&W's poena, has continued hear-s by his House subcommit-on Health & the Environ-ment to determine if the tobacco industry pulled off "one of the most concerted and well-organized conspiracies of silence in Corporate America." B&W says the documents were stolen.

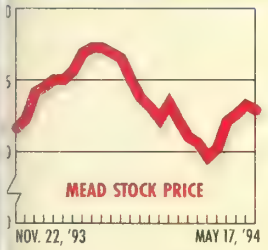
THE DOPE ON FINANCIAL DERIVATIVES

Investment bankers couldn't have expected a very sympathetic hearing. And in fact, the long awaited—and much leaked—General Accounting Office study on financial derivatives, finally released on May 18, is expected to prompt new attempts at Congressional regulation. The report warns that the failure of a large derivatives player would have highly damaging repercussions throughout the financial system, and recommends increasing public disclosure of derivatives activity and establishing capital standards for dealers, including securities firm affiliates and insurance companies. Congressional hearings are scheduled to continue on May 25, and Hill sources say momentum is building for passage of some legislation this year.

SELLING A MOTHER LODE FOR $5 AN ACRE?

This deal makes NAFTA look like peanuts. Calling it "the biggest gold heist since Butch Cassidy," Interior Secretary Bruce Babbitt reluctantly signed off on an agreement granting a Canadian mining company rights to 1,800 gold-laden acres in a remote corner of Nevada. Toronto-based American Barrick Resources clinched access to the estimated $10 billion mother lode thanks to an 1872 law intended to boost settlement of the West. Cost to ABR for the rights: $5 an acre. At current gold prices, ABR stands to clear about $4.5 billion, after operating costs and a $1 billion investment in equipment.

LOSING BELL



SHOW MEAD THE EXIT RAMP

s others jockey for space the Information Highway, lead wants out. The company id on May 16 that it wants to ll its Mead Data Central vision, which provides on-line formation through the Lexis/ exis service. Mead, which rchased the unit for $6 million 1968, said the sale will allow to focus on its paper business. vestors reacted equivocally, dding Mead shares up 3%, 44½, on the news, then send-g them to 42⅜ the next day. t PaineWebber analyst wrence Ross said Mead Data uld fetch $1.8 billion. Likely itors: Knight-Ridder, Dow nes, Times Mirror, and the ew York Times, among others.

DATA: BRIDGE INFORMATION SYSTEMS INC.

HEADLINER

CORPORATE SLACKERS CAN BREATHE EASIER

Shareholder activists are losing a key reformer: Dale Hanson, CEO of the $80 billion California Public Employees' Retirement System (CalPERS), is resigning his post to head a financial-services start-up.

Since Hanson joined CalPERS in 1987, the nation's largest public pension fund has pressured Corporate America's poor performers for management accountability, better boardroom practices, and truly independent directors. During his tenure, Hanson met with 65 CEOs and played a role in ousting Paul Lego of Westinghouse, Kay Whitmore of Eastman Kodak, and IBM's John Akers, among others, and in the early retirement of Boise Cascade's John Fery.

CalPERS General Counsel Richard Koppes is likely to become acting CEO while the board searches for Hanson's replacement. Among the contenders: CalPERS Chairman William Crist, board member Fred Buen Rostro, and California State Teachers' Retirement System CEO James Mosman. Hanson expects to start his new job, at American Partners Capital Group, on July 1. The firm will invest money from smaller pension funds in housing and venture companies.

By Judith Dobrzynski

IBM: HIGH GEAR FOR THE SUPERHIGHWAY

Amid all the Info Highway ruckus, IBM has been noticeably quiet—until now. The computer giant is working on final details of a plan to pull far-flung efforts into a new group to attack superhighway-type opportunities. It's investigating interactive TV, video conferencing, multimedia, and a variety of network-based offerings including a personal communications service. All this is the result of a high-level task force which has been developing what insiders call IBM's "infostructure"—the technologies and services to deliver network-centric computing.

NOT LOOKING PRETTY AT MEDIA VISION

The other shoe has dropped at onetime Silicon Valley star Media Vision Technology. Make that six shoes: On May 17, three top executives—including founder and CEO Paul Jain—resigned from the maker of personal computer multimedia gear. The resignations follow allegations by current and former executives that the company falsified sales records and pushed retailers too hard, prompting product returns, unexpected losses, and a joint FBI-SEC probe. The company has hired Price Waterhouse to work with its creditors and banks. Jain has denied wrongdoing.

ET CETERA . . .

- USAir deferred delivery of 40 Boeing planes and cancelled options on 76 more.
- Woolworth faulted senior management for inaccurate reporting; its CFO resigned.
- Quaker Oats will cut products and jobs. Earnings hit: up to $130 million, pretax.
- United Airline's stock is down, so pilots want to renegotiate a proposed buyout.

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EDITED BY OWEN ULLMANN

WHY LOBBYISTS WILL KEEP RUNNING SCARED

A lobbyist surveyed the power-lunch crowd at Duke Zeibert's restaurant and pondered the brave new world confronting Washington influence-peddlers. Con-ess will soon make it illegal to buy Duke's famous boiled ef for lawmakers and staffers or slip them tickets to Wash-ton Redskins games. How's a lobbyist to ply his trade? "We ve no choice but to adapt," he sighs.

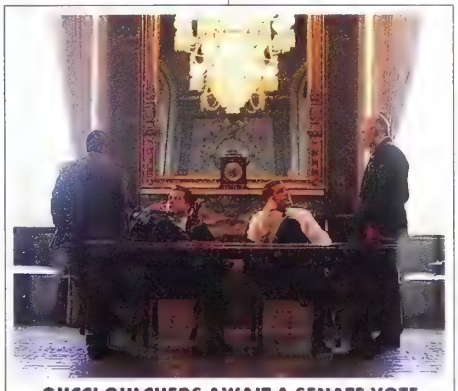
Why so glum? Surprising Beltway insiders, Congress re-nded to President Clinton's call for reform and is nearing proval of the first major lobbying restrictions in 40 years. e are the scapegoats for what is per-ved to be an improperly functioning nocracy," grumbles superlobbyist arls E. Walker. Some people "think if u make it illegal to have lunch with a mber of Congress, you will eliminate me and cure the common cold."

Hyperbole aside, the reforms pushed Senator Carl Levin (D-Mich.) and presentative John Bryant (D-Tex.) will nge the way the game is played. The st visible symbols of influence-ped-ng—from little gifts to lavish junkets—l be curtailed. Although special inter-s will retain clout through campaign tributions, which are untouched by changes, their activities will come under closer scrutiny.

L DISCLOSURE. Among those to face the spotlight's glare for first time are stealth lobbyists, such as lawyers who dis-se lobbying activities as legal services and foreign interests o have successfully masked their clout on the Hill. The asure also will require anyone seeking to influence Congress the executive branch to disclose clients and lobbying ex-nses. That has prompted the gunslingers of Gucci Gulch to vl that the new record-keeping requirements, which differ m IRS lobbying rules, will be costly and complicated.

More troubling to the lobbyists are curbs on entertaining congressional staffers, the key contacts when it comes to shaping legislation. To compensate, one business rep predicts firms will spin the congressional "revolving door" even faster to recruit longtime Hill aides who can provide access. With freebie meals a thing of the past, some lobbyists say they will seek more in-office appointments on Capitol Hill. "Expense-account lunches will be replaced with buy-your-own-bagel breakfasts," says one representative for a large company.

But lawmakers are laboring to save one of their cherished perks: fun-in-the-sun "issues briefings." The congressional golf and tennis caucus may be allowed to accept corporate money for portions of junkets that they claim are work-related. "It's a mutual addiction," concedes one trade group official. "They need it as much as we need it."



GUCCI GULCHERS AWAIT A SENATE VOTE

To be sure, new restrictions alone will not end the corrupting influence of special-interest money on legislation. With campaign-finance reform stalled, some lobbyists say they will try to maintain their leverage by spending more on political contributions. Says one business official: "Unless Congress passes campaign-finance reform, money will just go from lobbying directly to campaigns."

Still, as public anger at the influence of special interests grows, the lobbyists' loopholes are shrinking, and lawmakers seem ever more willing to sacrifice perks to hang on to their jobs. Even hard-core reformers have been pleasantly surprised by the trend. The current reform proposal is "much more than anyone would have ever expected," admits Meredith McGehee, an official at Common Cause, a self-styled "citizens' lobby." Many lawmakers hope this year's flurry of concessions will satisfy irate voters. But they could whet the public's appetite for a more substantial second course.

By Richard S. Dunham

PITAL WRAPUP

ONGRESS

The AFL-CIO's dream of passing legislation that would bar companies om permanently replacing strikers is ding fast. Senate Democratic lead-'s scrapped plans for a vote before emorial Day, after Big Labor's lobby-g blitz came up three votes short of e 60 it needed to choke off a Senate ibuster. A united business coalition as kept swing senators in line, and me laborites are miffed that Presi-nt Clinton won't go to the mat for e bill, preferring to hoard his political pital for health-care reform. A de-at this year could mark the death of bor's cherished goal. Its chief Sen-ate advocate, Howard M. Metzenbaum (D-Ohio), is retiring. And Republicans are expected to pick up Senate seats in the fall elections.

TRADE

Commerce between the U.S. and Mexico has boomed since passage of the North American Free Trade Agreement, but so have the regulatory snarls for American exporters. Mexican customs rules—such as a requirement that warranties be written in Spanish—were largely ignored before, but now they are enforced. One result: U.S. computer shipments are being held up until they meet Mexican electronics standards.

THE WHITE HOUSE

How determined is the Clinton Administration to sell its health-care plan? Consider the experience of the Computing Technology Industry Assn. (CTIA). When the group sought a White House briefing in May about the Information Superhighway, the Administration wanted a powwow on health care as well. But when it came to finding a location, the Administration claimed it had a room free just long enough for the health-care pitch. When the CTIA insisted on its Infobahn session, the White House offered the room for both briefings. After all that, the techies pooh-poohed the health plan.

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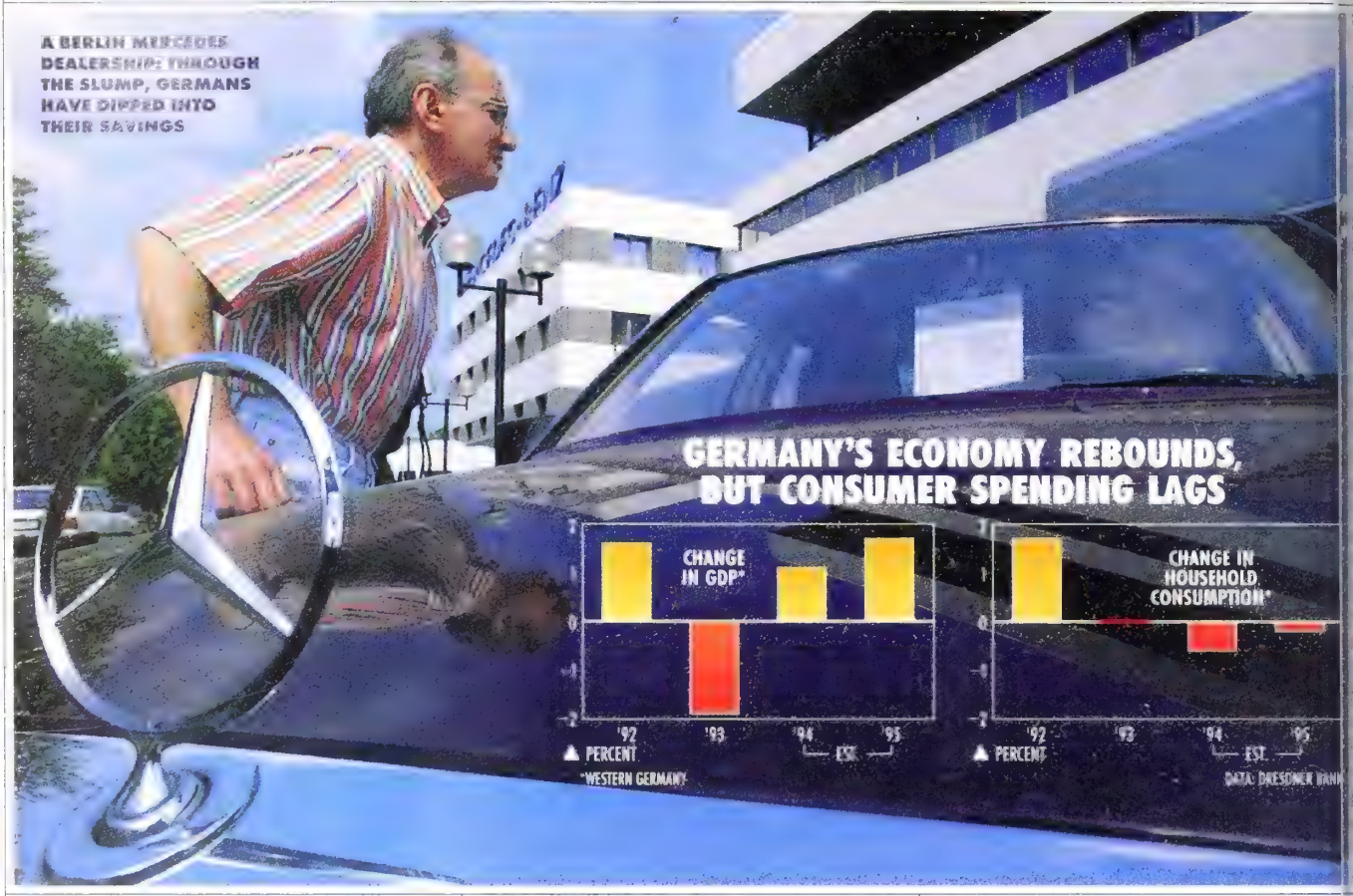


GERMANY'S JITTERY CONSUMERS

Spending phobia could weaken the recovery and harm Europe

Otto Normalverbraucher—that's the name Germans give to Mr. Average Consumer. This Otto is a key player in his country's economic cycle, since his spending on everything from cars to clothes accounts for 57% of the German economy. And now's Otto's moment to shine. Thanks to meaty rate cuts by the Bundesbank, German manufacturing and construction are expanding again. Export orders are picking up. The only thing needed for a nice sustained recovery in Europe's biggest economy is for German consumers to start spending again.

But this time, German consumers are just clutching their wallets tighter. Personal spending seems set to decline through 1994 and 1995 (chart). It's a real case of spending phobia—and it could badly hamper the German recovery. That's a prospect dreaded not only in Bonn but in every capital in Europe, since Germany traditionally consumes $165 billion in imports from its neighbors. To be sure, the rest of Europe is struggling on its own out of recession. But German consumer demand could make the difference between a feeble recovery and robust growth.

Plenty of factors dampen German spending. Unemployment, at 10%, keeps rising. Rents are climbing, too, by 6% in the west last year and 58% in the east. Then there are taxes—more and ever higher taxes—all to pay off the massive outlays triggered by unification. Som 34.4% of the average west Germa worker's wage is siphoned off to incom and social-security levies. That's up fro 30% in 1991 and double what it was 1974, when Germany's economic mirac years came to an end.

SUFFERING. The pressure to pay for ur fication and generous social services pu the country's policymakers in a tigh bind. Clearly, a tax cut would be th best way to relieve the consumer. Bu lower tax receipts would defeat all e forts to bring a huge budget deficit un der control. In fact, Chancellor Helmu Kohl's government thinks an income su tax of 7.5% is needed next year: His S cialist rivals want a surtax of 10%. Th only recession-ending strategy may l with the Bundesbank, which will need t cut rates further. Lower rates are fin but they work a lot more slowly on the own than when combined with fisc relief.

So German consumers keep suffering Many have fought desperately to mai tain their lifestyle. As a result, co sumption ticked up slightly through th worst of the recession. Trouble wa Germans had to dip into savings to kee buying. After dropping from 13.9% (

:sonal income in 1992 to 12.8% last ar, western Germany's savings ratio l shrink further to an estimated 12.5% s year, two points below 1991's rate. Few economists think consumers can ep eating into their seed corn, despite ttered signs of higher spending. First-arter retail-sales volumes did buck up % from the final quarter last year. But gain, says Commerzbank economist gen Pfister, is "a bit of a miracle. It's a lasting change in [consumers'] be-vior." The quarter, indeed, was flat npared with the same quarter a year). Another encouraging sign—a rise in o registrations early this year—was ersed in April with a 12.4% slump.

V FRILLS. Meanwhile in east Germany, easy gains in spending have evapo-ed. Thanks to wage-leveling with the st for those with jobs and bigger es for the rest, disposable incomes the east rose at a fast 7.3% clip last ar. But when adjusted for faster in-ion of 8.8% there, says Federation German Industry economist Siegfried zig, "real incomes probably [showed] a ght decrease." Just like their western sins, the *Ossis* had to save less to ep spending. Besides, the east Ger-ns' shop-'til-you-drop hunger for con-ner goods is now well and truly sat-By early last year, according to the ndesbank, eastern households already ned as many television sets as west-ers and had all the fridges, freezers, l washers they needed.

German retailers and marketers are covering that customers are getting a pickier. At west Berlin's tony DeWe department store sales of ap-el, a key part of the store's offer-s, are on the decline. A local version the Kmart culture has rapidly taken d: German consumers are going vn-market and avoiding the frilly stuff t just costs too much. Obi and Horn-h, two do-it-yourself home repair ins, are doing a brisk business. Aldi, 20 billion discounter, is thriving. At aloger Otto Versand "customers are ving away from high fashion," says okeswoman Annette Busse. "They n't buy so many trendy articles—it's k to basics like T-shirts, jeans, blaz-, and sweaters."

Analysts also see consumers delaying placement purchases of everyday ar-es from clothing to shoes. "Consumers at last realizing how badly their in-nes are being hit," says Jörg Laser, nomist at Hamburg-based M. M. War-g Bank. As Germany stumbles ough a recovery like no other, Otto rmalverbraucher is counting every nnig.

By John Templeman in Bonn, with borah Wise in Berlin and bureau orts

JAPAN

HERE COMES THE GREAT GLOBAL TAX WAR

The U.S. struck first on transfer pricing. Now, Japan is retaliating

On the campaign trail in 1992, Bill Clinton vowed to make multinationals pay $45 billion more in taxes. Following the President's cue, the Internal Revenue Service has hit such Japanese companies as Hitachi, Yamaha, and Nissan with hefty claims.

Now, Japan is striking back. The Japanese National Tax Administration Agency (NTAA) has socked Coca-Cola Co. with a $145 million tax deficiency for 1990-92. They also hit AIU Insurance Co., the Japanese subsidiary of giant American International Group Inc., with an $87 million bill that was later reduced to $37 million in a settlement. "There is clearly a war going on," says a Tokyo lawyer who advises foreign companies on Japanese tax laws.

All of these cases involve disagreements over what is called transfer pricing, the accounting system by which companies report cross-border transactions among subsidiaries. Governments believe that multinationals manipulate these figures so as to underreport profits and lower their taxes. For example, the IRS said Nissan's U. S. subsidiary inflated the prices it paid to its parent for finished cars it was importing.

LITTLE BITE. In the U. S., the IRS has been moving aggressively to pierce the transfer-pricing veil. It's putting in penalties of up to 40% for underreporting, and it's tightening up rules. Companies are particularly upset by new requirements for enormous amounts of expensive documentation. The burden is on them to prove that the transfer prices they report are "arms length," or the same as those that would have been reached by unrelated parties. "It doesn't say you have to hire an outside economist or lawyer, but the fact is any sizable company will have to do that," says William C. Gifford, a tax partner at the New York law firm of Davis Polk & Wardwell in New York.

American multinationals are also feeling the IRS's bite. PepsiCo Inc. is now battling the IRS over an $880 million bill for 1985-89 that was levied after an extensive audit of such subsidiaries as Taco Bell, Pizza Hut, and Kentucky Fried Chicken. PepsiCo is asking for a $213 million refund.

But the Japanese think they are being made special targets. They are also annoyed at what many lawyers say is a shoot-from-the-hip approach by the IRS. Indeed, many of these cases end up being settled for much less than the IRS initially sought. For example, in reaching a $160 million settlement with Nissan, the IRS backed down more than $600 million from its initial calculation of the U. S. subsidiary's profits, reports *BNA International Business & Finance Daily.*

Still, the stepped-up enforcement has certainly caught the attention of the Japanese authorities. Once considered unsophisticated on transfer pricing, they have come up the learning curve rapidly. The AIG case, for instance, involves fi-

JAPAN HANDED COKE A BILL FOR $145 MILLION ON BACK TAXES INVOLVING ROYALTY INCOME

PAUL VAN RIEL, BLACK STAR

nancial services, a far tougher business to audit than manufacturing. The NTAA said that American International Group was inflating reinsurance fees paid to subsidiaries in Bermuda and elsewhere. The Japanese "are trying to get on the dance floor, too," says David Rosenbloom, a transfer pricing specialist at Caplin & Drysdale in Washington.

PEACE EFFORT. Rosenbloom adds that other countries are also trying to tap into what they see as a potentially lucrative revenue stream. The German tax agency is "heightening audit activity beyond what they ordinarily do," he says.

Fear is widespread that an all-out tax war is about to erupt. To head that off, the Organization for Economic Cooperation & Development has been trying to update its 1979 guidelines for transfer pricing that most countries use.

The big issue is whether there will be a move away from "arms length", which some lawyers say is an unworkable standard for companies in other than commodities businesses. Experts and some members of Congress are pushing for a possibly simpler system that allocates profits by a formula such as the state of California's that factors in percentage of world sales, assets, and other indicators.

The OECD, lobbied hard by the U.S., is likely to stump for keeping the arm's-length concept. But it may recommend use of a formula system in some cases such as global financial trading, where even the IRS seems to be agreeable. Whatever the outcome, the confusion is unlikely to end anytime soon.

By Stanley Reed in New York, Larry Holyoke in Tokyo, and Douglas Harbrecht in Washington

MEXICO

WILL A *YANQUI* PARTNER MAKE TV AZTECA A PLAYER?

An NBC deal would help the TV network take on giant Televisa

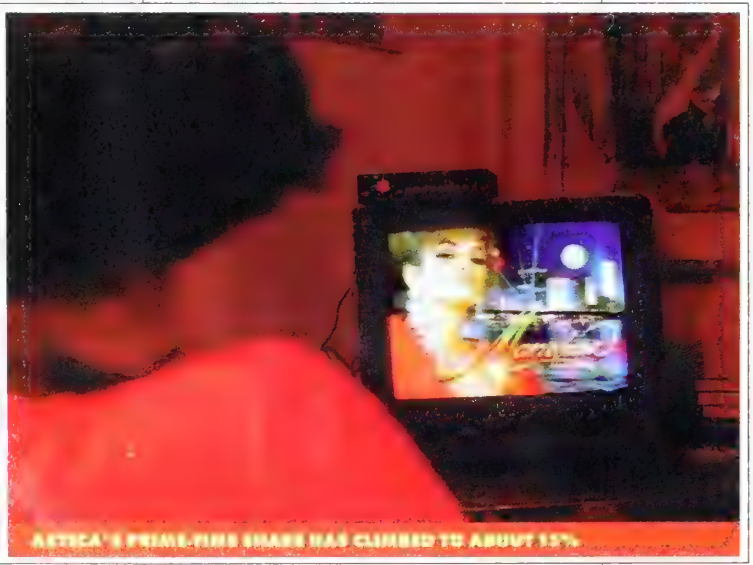
When Ricardo Salinas Pliego bought two television networks from the Mexican government for $640 million last year, one of the assets he acquired was the stylized eagle that is the logo for TV Azteca. Now, Salinas has added another bird to his collection: the NBC Inc. peacock.

The Azteca alliance with the U. S. TV network, announced in mid-May, could feather both nests nicely. Salinas' highly leveraged media company will get access to reams of programming and expert technical assistance. It could also get a sorely needed cash infusion. And Azteca will provide a platform for NBC's expansion into Latin America.

"TRULY EXPLOSIVE." With the Azteca deal, NBC becomes the first U. S. company to brave the broadcast market south of the border. The network says it is attracted by Mexico's TV audience of 80 million viewers and what it sees as huge opportunities in the wake of NAFTA's passage. "We put Mexico up there with China and India as one of the truly explosive growth markets," says Tom Rogers, president of NBC Cable & Business Development.

While no money has yet changed hands, the deal gives NBC the right to acquire 10% of Azteca's stock for $120 million by yearend and increase that investment to 20% over three years. But executives close to the network say it may wait a few years before deciding to purchase an equity stake.

It will take more than the famous peacock to impress Azteca's competitor, Grupo Televisa, Mexico's own behemoth. With three national networks and a 90% share of the Mexican ad market, it has a virtual lock on Mexican television. Its more than 42,000 hours of programming and its interests in publishing, radio, and recording make it the largest Spanish-language entertainment conglomerate in the world.



AZTECA'S PRIME-TIME SHARE HAS CLIMBED TO ABOUT 15%

Faced with a mature broadcast market in the U. S., NBC and its rivals are seeking growth overseas. But the surge southward so far has been mostly in pay TV. MTV, the Discovery Channel, TNT, and Fox are all broadcasting in Spanish to Latin America's wealthy subscribers. NBC climbed aboard last year with its 24-hour news service, Canal de Noticias. The network also paid $23 million for a 56% stake in Europe's Super Channel. And NBC's Rogers says the network plans to expand its cable business news service, CNBC, to Latin America and Asia.

LOSING TIMIDITY? For Salinas, the alliance means valuable knowhow from NBC. Before he bid for Azteca, the closest Salinas had come to the TV business was selling sets in his family's national chain of Elektra electronics stores. The deal could also help cure Azteca's problem luring advertisers, as NBC adds Mexico to the global and regional packages it offers prospective buyers. Until now, Salinas has had trouble overcoming advertisers' skepticism that he would ever reach his goal of 25% audience share. While Azteca's average prime-time share on its two channels is up about 15%, it's not enough. The big advertisers "have a relationship with Televisa, and they're worried about losing it," says Joel Angeles, media director at DMB&B advertising agency in Mexico City.

But if NBC can help Azteca boost its ratings, advertisers may lose their timidity. TV accounts for about 65% of the total $1 billion in Mexican ad spending last year, compared with 35% in the U. S., and ad spending is expected to grow about 15% this year. With advertisers competing to win the hearts and minds of the 60% of Mexicans under 25, there's plenty of room for another player in Mexican TV. With Azteca, NBC wants to be sure it's there first.

By Elisabeth Malkin in Mexico City with Mark Landler in New York

EDITED BY STANLEY REED

VHY THE WEST MAY COME UP EMPTY N A MONSTER OIL PATCH

Just a year ago, remote Kazakhstan was considered the world's brightest energy frontier. Oil companies, led by Chevron, Elf Aquitaine, and Agip, flocked to its landked steppes and deserts to exploit the vast petroleum alth and the pro-business policies of Nursultan Nazarbayev, burly President of this former Soviet republic.

That was then. Now, several huge energy projects, not to ntion Kazakhstan's economic future, face daunting obstacles. uld-be investors in Kazakhstan must contend with Russia's ssertion of its regional power, haggles over pipeline routes, d rising Kazakh nationalism. The turmoil is threatening en the showpiece $20 billion, 4.5 billion-barrel Tenghiz pro- t pursued by Chevron Corp. since 1987. In early May, evron announced it was cutting spending at Tenghiz, stirg speculation that the project is in trouble.

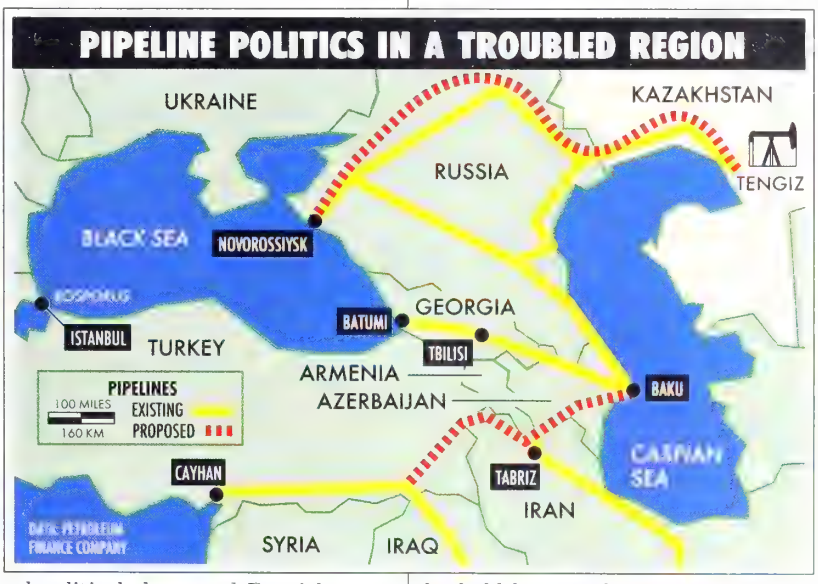
Other potential investors are closely watching events in Kakhstan and the fate of e Tenghiz project in rticular. Because Kakhstan has huge hydrocarbon deposits and long history of dealg with Western oil mpanies, it is consided a bellwether for e upstart countries on ssia's southern tier.

The big oil projects nned for these counes already are having nilar problems. In erbaijan, probably e most promising hydrocarbon lode after Kakhstan, an internationconsortium including noco, BP, Statoil, nnzoil, and Unocal ds itself stymied by local political chaos and Russia's musng in on the oil wealth.

HNIC TURMOIL. At the same time, nascent Kazakh nationaln also has investors worried. After two centuries under oscow's sometimes brutal sway, many Kazakhs are demandg to have their language, culture, and traditions restored and have wealth redistributed to them from ethnic Russians. Acunting for 39% of Kazakhstan's 17 million people, Russians im that they are encountering resistance to their ownership property and are now meeting discrimination in business d in university admissions. There have been at least 20 shes this year between Russians and Kazakhs. Any susned armed conflict is likely to prompt calls for military reiation from Russia's defense sector and its nationalist legisors. Says Professor Nurbulat Masanov, a historian at zakhstan State University: "The possibility of political colse is becoming serious."

This ethnic tension arises just as Russia is trying to reasrt claims to the oil wealth of these lands. Kazakhstan, erbaijan, and Turkmenistan are landlocked—which strengthens Moscow's hand. The Yeltsin government is twisting arms to make sure that virtually all pipelines from these places have their terminals at Russia's Black Sea port of Novorossiysk.

The Russian drive appears to be strongly influenced by Prime Minister Victor Chernomyrdin, a career gas-industry boss, who "has a sense of the importance" of all this, says Julia Nanay, an analyst at Petroleum Finance Co., a Washington-based consulting firm. Russia wants a slice of its neighbors' oil and gas revenues—through transit fees or otherwise. It also is seeking a choke hold on the Caspian countries' exports to make sure they don't displace Russia's output to Europe or use their earnings to turn themselves into Central Asian Libyas. Moscow has thousands of troops in the region to back up its demands. In the latest pressure move, the Russians, citing an old Soviet-Iranian treaty, are calling the Caspian Sea—where Azerbaijan, Kazakhstan, and Turkmenistan claim promising fields—a Russian-Iranian lake.



DIRE STRAIT. Even if Western companies give in and send exports through Russia, problems are likely to continue. Turkey also wants the pipelines and their revenues, and it is raising environmental concerns about too many oil tankers going through the Bosporus Strait. Iran is another possible route for exports, but Washington is determined to freeze Iran out. Some Western companies are pushing for multiple pipelines to make certain they can't be held hostage by a single power.

There also is uncertainty over who will pay for the pipelines. Right now, Chevron is balking at bearing most of the more than $1 billion cost of building a line out of Tenghiz. The company had been working with other members of the Caspian Pipeline Consortium, including Kazakhstan, Russia, and the Oman Oil Co., which is headed by Bermuda-based trader John Deuss. Both Russia and Kazakhstan agreed to contribute only existing pipelines as their share. Oman would offer only a feasibility study, while requiring Chevron to put up most of the equity and shoulder the risk.

Still, Chevron won't be able to back away easily from Tenghiz, one of the world's last giant new fields. The California major is basing its growth strategies over the next two decades on new overseas projects, such as Tenghiz. Chevron and other companies pursuing former-Soviet megadeals will try hard to make them work. But some are beginning to wonder if they are chasing illusions.

By Juliette Rossant in Almaty, Kazakhstan, and Peter Galuszka in Moscow

ALAN BAKSEDEN

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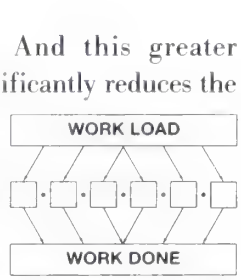

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HEALTH CARE

EVEN CHEERLEADERS GET THE BLUES

Selling the Clinton health plan isn't easy—especially in union halls

It's an early May morning in a Milwaukee union hall, and AFL-CIO organizer Diane M. Ebenreiter is midway through her standard pep talk on health-care reform. Praising the Clinton Administration's Health Security Act, she stresses its promise of universal coverage, cost containment, and quality care. Then Ebenreiter fires her best shot: The proposal, she argues, could be a bonanza for workers. "Health-care costs are affecting each and every one of us at the bargaining table," she declares. If the proposal produces savings for employers, she says, "we can get some of this back in higher wages."

But the 42-year-old union activist is facing an unexpectedly tough audience: seven skeptical leaders of District 10 of the International Association of Machinists & Aerospace Workers. "Since when do they pass along savings?" asks one. "I want to know if our benefits will be taxed," chimes in another. After the session, Daniel L. Bigalke, a District 10 business rep, says he isn't sold on the Clinton plan. "We've got a wait-and-see attitude," he says. "Right now all of us are just learning what this is about."

IN THE TRENCHES. The skittishness that pervades the meeting may hold ominous overtones for the White House. Except for some old-line industries with huge medical-insurance bills, such as autos, much of business opposes the Clinton plan. So the White House is counting heavily on a push from Big Labor.

Ebenreiter and hundreds of other union foot soldiers have taken to the trenches in a $10 million grassroots campaign to revive the plan's flagging chances. But the chilly reception she receives in Milwaukee is one sign that the rank and file may not be marching in lockstep behind their leadership. In fact, if Ebenreiter's experience in Milwaukee is any indication, the chance of a late surge of support from the hinterlands looks like a long shot.

AFL-CIO organizer Ebenreiter taking a break: A lot of rank and filers, still steamed over NAFTA, are less than eager to back the Clinton plan

Should the union-backed campaign to generate millions of phone calls and letters to lawmakers fizzle, it would be more than an embarrassment for Hillary Rodham Clinton. It also would be a severe setback for labor leaders, for whom health-care reform has long been a Holy Grail.

Since health care has been one of the most important benefits a union can offer a member, at first glance it's hard to understand why Big Labor would be such a big backer of reform. But reform could aid laid-off workers whose benefits have run out. And because some unionized employers' health premiums could be slashed by 50%, a health-care overhaul would enable union leaders to focus on wages during contract talks.

Top labor officials are having trouble whipping up fervor for the plan, however. Why? Many union members are still seething over White House backing for NAFTA. And Clinton's tepid support for the striker-replacement bill (page 5) won't help calm them down. Besides, since organized workers already enjoy generous health benefits, they fear that a shift toward a national benefits package could erode support for the gold-plated plans. What's more, some lawmakers are musing taxing benefits beyond a standard package to pay for reform—and union workers could take a major hit.

Tag along with Ebenreiter on a typical day, and you can see why labor's battle is uphill. Ebenreiter spends at least five days a week on the road, away from her husband and two stepdaughters in Sheboygan, Wis. From dawn until well after dark, Ebenreiter moves from factory to union hall repeating her health-care mantra. "We've got to let them know what we want," she says. "Once the law is made, that's it. There's nothing we can do."

At the meeting with the machinists in Milwaukee, she has to spend more than an hour reassuring the veteran trade unionists and walking them through the details of the proposal. To the officials worried that benefits would be taxed, she replies that they wouldn't be. "But I don't see that in here," he protests as he pores over his brochure.

After the meeting, she heads to a nearby Irish pub for lunch and a strategy session with her counterparts at the Wisconsin Federation of Nurses & Health Professionals and Wisconsin Citizen Action. Soon, the talk turns to the North American Free Trade Agreement and labor's bruised feelings over

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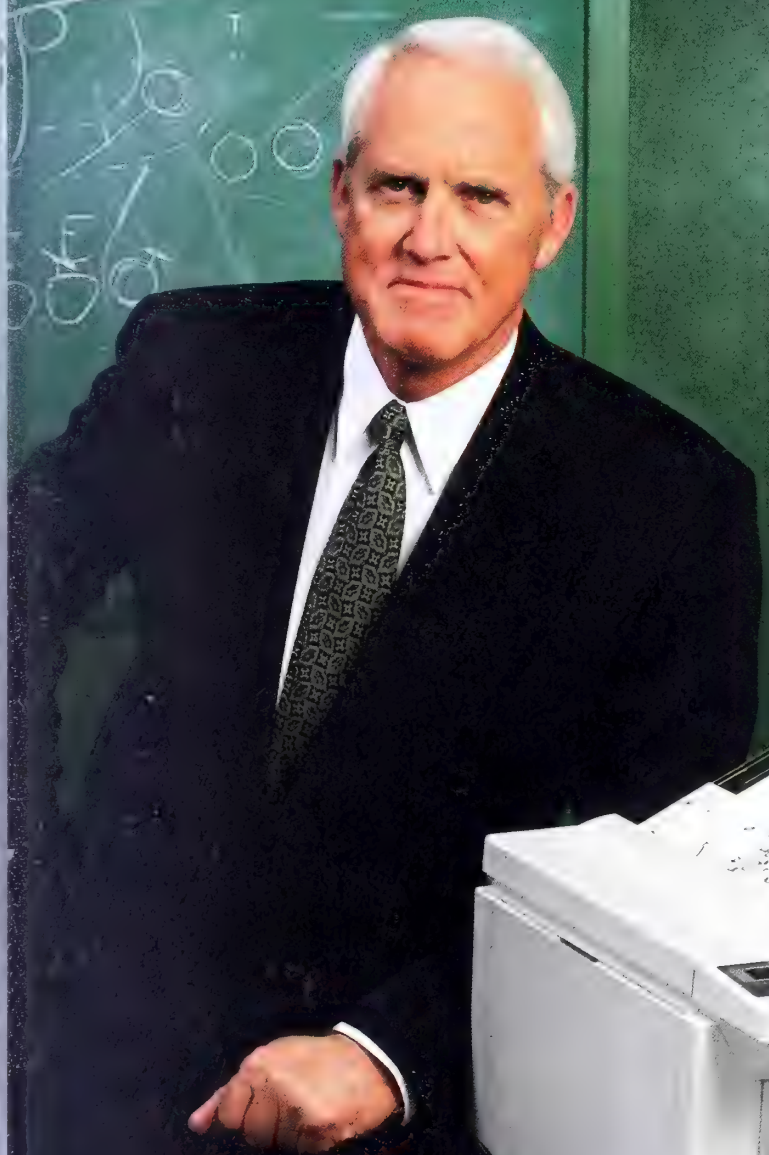

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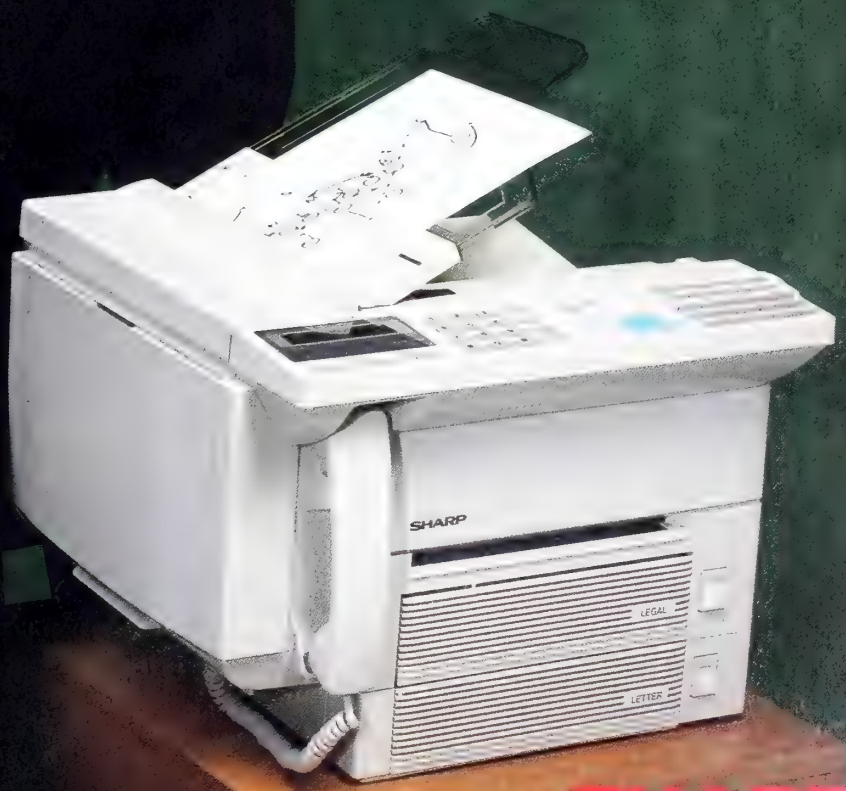

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Government

Clinton's fervent support for the pr
Nancy Van Meter, a field representa
of the federation, which represents 3
health professionals in the state, s
that labor's NAFTA defeat remains su
bitter memory for many rank and
ers that when she began pitching C
ton's health-care proposal, "we wer
even calling this the President's bill

After lunch, Ebenreiter sets off
a round of meetings with reporters,
iticians, social-service officials, an
building-trades leader. One key mee
is a visit to the office of Senator H
Kohl (D-Wis.) with Ralph R. Janasik
unemployed pressman whose wife
fers from multiple sclerosis. Janasik
his job when his boss declared ba
ruptcy. His insurance ran out in Ap
and his union, Milwaukee Graphic A
Local 577, is picking up the cost thro
May 30. After that, Janasik won't h
any help footing the $1,000 monthly
for his wife's treatment.

At Kohl's office, Ebenreiter a
Janasik talk to an aide about what h
might be available, including a state-
emergency insurance pool for peo
with preexisting conditions. Then th
go to the local United Way, where a
cial worker promises to try to h
Janasik find a job so that he does
have to dip into retirement funds. He
ing Janasik represents a three-hour s
trip for Ebenreiter. But it helps h
underscore for Kohl's office that ev
well-protected union members ne
health security.

TOUGH SELL. Ebenreiter ends her day
a cavernous, smoke-filled room in
American Serb Memorial Hall, talk
to a group of about 20 members of U
ed Auto Workers Local 9. Though th
brewery workers have just finished th
shift, they listen patiently as Ebenrei
talks up reform. But when she co
pletes her litany of benefits, a woman
tacks her, declaring angrily that she h
heard that the reform package wou
not cover her aging mother. Ebenreit
her energy flagging, tells her the Pre
dent's plan would cover everyone.

So goes a day in the health-refo
trenches. "My husband sometimes w
ders why I'm so tired and crabby
the weekends," sighs Ebenreiter. S
remains optimistic about enactment o
broad health-care-reform plan, despi
a growing sense, in and out of Washi
ton, that lawmakers have already ma
up their minds to pursue politically s
er—and cheaper—incremental chang
And politicians may not be the on
wary ones. Union workers, it turns o
may also be fearful of taking a gre
leap into the health-care unknow

By Christina Del Valle in Milwauk

Special Advertising Section
In association with the
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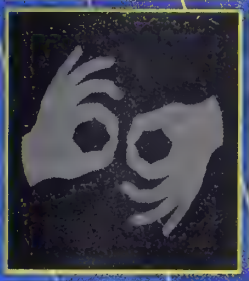
The New Competitive Advantage

Expanding the Participation of People with Disabilities in the American Work Force



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Dear *Business Week* Reader:

James S. Brady, Vice Chairman

Alan A. Reich, President

You may not be able to tell from our photos, but we both use wheelchairs.

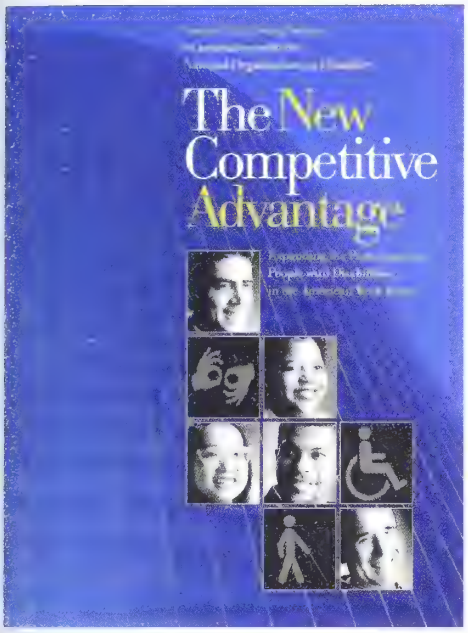
One of us was organizing a Presidential event at the Washington Hilton when an assassin's bullet, aimed at President Reagan, happened to strike the President's Press Secretary instead.

The other was diving into a Massachusetts pond during a family outing and suddenly hit a bottom that was too shallow, snapping his spinal cord at the neck.

That is how, in an instant, we joined the disability community. Anyone can; no one is immune. We both had families, careers, ambitions, lives—and were determined, one way or another, to keep them, maintain them, expand them. So, in 1984, we joined forces, within the National Organization on Disability (N.O.D.), to work for the full participation and contribution of all people with disabilities in American life.

According to the latest census, there are 49 million men, women, and children with disabilities—the nation's largest minority. Besides those of us who use wheelchairs, the disability population includes people with hearing impairments, visual impairments, speech impairments, missing extremities, mental retardation, epilepsy, and other physical, mental, or emotional disabilities that substantially limit major life activities. And living with these individuals and their disabilities on a daily basis is at least an equal number of family members.

Since it is in the communities of America where people with disabilities go about their lives, N.O.D. promotes voluntary grassroots action through our growing network of Community Partners– 3,500 member towns, cities, and counties. In our ongoing "Calling on America" campaign, we call on our partners to expand participation in jobs, education, religious worship, and voting, and in social, cultural, and recreational activities. We call for effective implementation of the Americans with Disabilities Act (ADA) of 1990, for which N.O.D. and many other disability groups fought long and hard. And we call on everyone to help open opportunities and improve attitudes toward all those with disabilities.



To find out how people with disabilities are doing and how they feel about their lives and their futures, N.O.D. recently commissioned Louis Harris & Associates to conduct the "N.O.D. Survey of Americans with Disabilities," the most extensive such poll ever undertaken. Some of the findings, related to employment, are reported for the first time in this *Business Week* special section in an article by Harris President and CEO, Humphrey Taylor.

While, as you will read, people with disabilities say things are improving for them, the fact remains that the gap in employment levels between individuals with and without disabilities is actually widening—despite an overwhelming willingness to work.

To help close this employment gap, N.O.D. three years ago established the Disability 2000 – CEO Council, composed of 250 CEOs of companies large and small. (They are listed in a public service advertisement in this issue.) Several of these CEOs eloquently make the case in these pages for employing people with disabilities. Significantly, they see such hires not as altruism, but as good economic sense.

Excellent examples abound, many reported in this *Business Week* special section. The major lesson you will learn from these case studies is that employing people with disabilities is not only good for people, but good for profits. Some accommodations in the workplace may have to be made, but, as we both have learned, they usually are minor and inexpensive.

As the nation's economic recovery continues, American business will face, once again, a shrinking labor force. Often the best people to be found for the job will be those with disabilities. Once employed, they will be contributing to business prosperity, family incomes, and the economic well-being of our nation.

The entire Board of Directors of N.O.D. joins us in expressing appreciation to *Business Week* for publishing this special section, "The New Competitive Advantage," and to the advertisers whose support has made it possible.

We call on you and the other 6.5 million readers of *Business Week* to join us in expanding the participation of people with disabilities in America's work force.

Everyone gains!

Sincerely,

James S. Brady
VICE CHAIRMAN

Alan A. Reich
PRESIDENT

PART 1

Full Participation: A Dream Deferred

Full participation in society—for most Americans, it's a benefit to be taken for granted—is a perquisite of living in the globe's most free and prosperous nation. But for America's 49 million citizens with disabilities, full participation remains a dream long deferred.

One pair of statistics tells the story as plainly as any other. In 1970, 56% of working age Americans with disabilities were not participating in the labor force. By 1990, this proportion actually had risen to 61%.

It was the tremendous human and social cost associated with this condition that, in part, provided the impetus for the passage of the Americans with Disabilities Act (ADA) in 1990. The most significant civil rights legislation in a generation, the ADA promised an end to discrimination against people with disabilities in employment, in access to public facilities, and in many other vital aspects of American life.

Four years later, the ADA has been transformed from a mysterious new mandate into an accepted instrument of social responsibility. Awareness of the ADA is on the upswing. ADA compliance seminars for executives and human resource managers are now commonplace. And lawsuits alleging discrimination against people with disabilities are up by 22%, as compared with levels of a year earlier.

Still on the Outside

But has all of this made a difference? Are the employment prospects of people with disabilities any brighter now than they were before the ADA? Or are there other, more hidden forces keeping Americans with disabilities out of work?

To find out, the National Organization on Disability (N.O.D.) this past January commissioned the public opinion research firm Louis Harris & Associates, Inc., to conduct the most comprehensive survey of the attitudes and experiences of people with disabilities ever undertaken (see accompanying article). The Harris organization interviewed more than 1,000 adults with disabilities nationwide as part of the N.O.D. Survey of Americans with Disabilities. In addition, N.O.D. officials spoke with dozens of employers in a wide range of industries to learn how they were changing their employment practices in the wake of the ADA.

The results were surprising. Conditions in the labor market *have* improved for workers with disabilities. Employers *are* responding in creative ways to the opportunities now available for employing more people with disabilities. But these developments so far appear to have had less effect on the fortunes of those with disabilities than most advocates of the ADA would like. People with disabilities remain on the outskirts of the American job market, still seeking admission, and many of the barriers confronting them do not appear amenable to ready resolution by the ADA alone.

Erik Johnson of Meridian Bank's Consumer Loans area processes loan requests that come through Meridian's telemarketing unit.

A Strategy for Profitability

All this leaves employers committed to increasing employment opportunities for people with disabilities facing a difficult dilemma. They can pursue the familiar course of strict adherence to the letter of the law, a move that unfortunately holds little hope of adding many new workers with disabilities to company payrolls or of fully insulating firms from ADA-related lawsuits. Or they can take the proactive approach, epitomized by the companies cited here, in order to avail themselves of a bloc of productive, highly capable employees who, the evidence shows, are ready, willing, and able to join America's work force.

In this litigious era, in which good intentions usually aren't good enough, employers may find the proactive approach to be not only good policy, but good for their bottom line. Companies that actively seek to make the best use of the talents of *all* job applicants and employees, we have found, almost inevitably tend to be more competitive than firms scrambling to fend off lawsuits.

For the most successful employers, in fact, attention to the ADA has become far more than a legal or social responsibility. It has become a strategy for profitability—a new competitive advantage in the search for capable workers—that puts them first in line to hire the most highly qualified people with disabilities looking for work.

It's a strategy that almost any employer, size or industry notwithstanding, can put in place. In what follows, we'll tell you how.

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Breaking the Lens of Stereotype

During a seminar on the social and economic conditions of people with disabilities sponsored by N.O.D. a few years ago, the syndicated columnist George Will remarked that "the most striking fact about the [disability population]...is that it is the most inclusive. There is a sense that we live in the antechamber of [this] community. I will never be black and I will never be a woman. But I could become [disabled] on the drive home tonight."

The data plainly bear out Mr. Will's observation about the inclusiveness of the disability community. According to the most recent findings from the U.S. Census Bureau, 49 million people, or nearly 1 in 5 Americans, have a disability. While disabilities are most common among senior citizens, fully 29 million Americans between the ages of 16 and 64, or more than 1 in 6 people of working age, also have a disability—making people with disabilities the country's largest minority group.

What's more, unlike race, ethnicity, or gender, disability is a condition that can emerge suddenly, at any time in life. Of working age people with disabilities, the new N.O.D. survey tells us, while 3 in 10 were disabled either at birth, in childhood, or in early adolescence, 4 in 10 did not become disabled until their 20s, 30s, or early 40s, and another 3 in 10 did not do so until middle age. Though it's sometimes easy to forget, most of those newly disabled have nearly all of the work-related capabilities they possessed before their disability, often reflecting as much as half a lifetime or more of learning and experience, waiting to be used.

An Unsettling Declaration

These findings urge caution on employers inclined to view workers with disabilities through the narrow lens of stereotype. For the most part, Americans with disabilities differ from nondisabled Americans only in the existence of their disability. Otherwise, individuals with disabilities tend to bring skills and backgrounds to the job market that parallel those of their nondisabled counterparts. Consider: among individuals with disabilities of working age, approximately half are married and nearly half are their families' main income providers. Two-thirds own their own homes and 4 out of 5 are high school graduates and, while workers with disabilities tend to have lower average earnings and higher poverty rates than nondisabled employees, nearly one-third of employees with disabilities earn $25,000 or more a year.

"Individuals with disabilities tend to bring skills and backgrounds to the job market that parallel those of their nondisabled counterparts."

N.O.D. President Alan Reich exemplifies the capabilities typical of a great many employees with disabilities. A Harvard Business School graduate and an expert in the Russian language, Mr. Reich lost none of these talents when a diving accident in his early 30s deprived him of his ability to walk. But an employer who looked only at his wheelchair might not notice.

Think that kind of institutional short-sightedness doesn't take place? Think again. Rick Douglas, the Executive Director of the President's Committee on Employment of People with Disabilities, tells the story of his appointment as head of the Vermont Vocational Rehabilitation Department in 1985. Mr. Douglas soon discovered that his department was not allowed to provide rehabilitative services for people with multiple sclerosis (MS) because, the State had decided, people with MS would not be able to hold a job.

Mr. Douglas, who has MS himself, found such a declaration a bit unsettling. And so should we.

Kristin Sawyer, Hyatt Regency Chicago, trainer with a hearing impairment, translates information about the hotel's concierge services to newly hired Jose Castro, who will serve as a house attendant. Kristin uses sign language to communicate the hotel's orientation program to those with hearing disabilities.

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Putting People First

It was one of politics' bitter ironies. For years, disability organizations had tried to educate the public about the appropriate terminology to use in referring to people with disabilities. But it took an inadvertent insult by a Cabinet Secretary to bring the issue to national attention.

In announcing a commission to review coal-leasing policies in 1983, then-Secretary of the Interior James Watt proclaimed, "I have a black, I have a woman, two Jews, and a cripple." Recalls *Washington Post* correspondent Lou Cannon, "Never had a public official offended as many constituencies in so few words."

The offhand comment quickly cost Mr. Watt his job. While corporate officials who use similar terms to refer to employees with disabilities may not suffer the same fate, the Watt episode is an important reminder for companies in the era of the ADA—*language counts.*

Use Appropriate Language

This focus on appropriate language is more than a semantic quibble. It's a way of recognizing that people with disabilities, whatever their disability might be, are first and foremost *people,* and should not be defined by their disability.

Still, there are times when reference to an individual's disability is unavoidable. In that case, the simplest rule of thumb is: "Put People First." Wherever possible, say "a man with a disability," "a woman who is blind," "a child with mental retardation," or "a job applicant with a hearing loss."

If succinctness demands, terms like "disabled employee," "wheelchair user," and "deaf woman" are usually regarded as acceptable. But phrases like "the disabled," "the handicapped," and "the retarded" are not. They emphasize labels, not people.

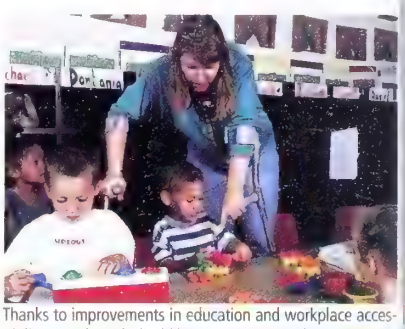
A Little Common Sense

The University of Kansas Research and Training Center on Independent Living offers some additional suggestions for employers confused about how to refer to people with disabilities:

Don't create superhumans. People with disabilities generally have the same range of talents and dispositions as nondisabled individuals. Portraying people with disabilities as "superstars" creates unfair expectations.

Don't sensationalize. Avoid emotion-laden phrases like "afflicted with," "suffers from" and "victim of." For instance, say "uses a wheelchair" or "a wheelchair user" rather than "is confined to a wheelchair."

Avoid euphemisms. Most people with disabilities dislike euphemisms because they suggest a refusal to accept one's disability. A phrase such as "differently abled," for example, is usually considered condescending.



Thanks to improvements in education and workplace accessibility, people with disablilities are increasingly moving into a variety of professional fields formerly closed off to them.

In the end, guidelines like these are nothing more than good common sense, but they can make a major difference in whether an employee with a disability feels comfortable and welcome. "Putting people first," says N.O.D.'s Ginny Thornburgh, "is simple respect. It announces to employees that you see the *person,* not the disability."

JCPENNEY

William R. Howell, CEO JCPenney

At JCPenney, when it comes to recruiting, training, and managing workers with disabilities, we've practiced a policy of "Putting People First" for years. So it's only natural that we would ask our own associates to describe the successes of our corporate efforts to promote the full participation of people with disabilities in our company's work force. Here's what they had to say:

"Penney's didn't doubt my ability to perform up to par simply because I was disabled. As a matter of fact, my manager had been actively seeking interviews with qualified disabled candidates for the position...After I was employed, she emphasized my performance strengths. It's like a supervisor making the job fit you, before they make you fit the job." —*Larry Vest, Auditor*

"I know that JCPenney management is committed to focusing on my abilities...for that reason, I have been totally committed for the past 13 years to giving JCPenney the very best that I have." —*Al Masters, Information Systems Specialist*

"...creating a productive work environment for a blind or otherwise physically disabled person is more than spending money. It is a matter of attitude—a willingness to listen and make adjustments where needed. This is what I have found at JCPenney." —*Jay Macarty, Systems Analyst*

"As a disabled person, I honestly believe you cannot find a better place to work [than JCPenney]. In 34 years...I have never found a company with greater patience, understanding, and the willingness to help in every possible way. —*Fred Deaton, Women's Casual Division*

"I have always looked at JCPenney as more than my employer. I consider them my partner, too. And a friend." —*Tony Hojmacki, Senior Layout Artist*

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That's why, years ago, we became the first automotive company to establish an assistance program for the physically challenged. Since then, Chrysler's Physically Challenged Assistance Program (P-CAP) has helped thousands of people—drivers and passengers alike—achieve a lifestyle of independence and freedom that may not have been possible otherwise.

And now the program offers you more than ever before. Higher cash reimbursements—up to $1,500 for adaptive driving or passenger aids installed on new Ram Vans and Wagons; up to $750 on all other new Chrysler Corporation cars, trucks and minivans. Complimentary three-year Cross Country Motor Club membership. A friendly, knowledgeable P-CAP Resource Center to help answer all your questions. And Chrysler Credit financing to qualified buyers.

P-CAP

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All topped by more experience assisting the physically challenged than any other automotive company. So call us, or contact your local Chrysler Corporation dealer, for more information. And let us show you how P-CAP can contribute to an active, mobile lifestyle. You won't be the least bit sorry.

For more information on the Physically Challenged Assistance Program, call us at **1-800-255-9877**.

"If I could fly..."

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MARTIN MARIETTA

N.O.D. Survey of Americans with Disabilities

Employment-Related Highlights

By Humphrey Taylor, President and CEO
Louis Harris and Associates, Inc.

In January 1994, The National Organization on Disability commissioned Louis Harris and Associates to conduct the N.O.D. Survey of Americans with Disabilities. This extensive study provides up-to-date measures of the quality of life, employment and social opportunities, financial status, and lifestyles of adults with disabilities and how these have changed.[1]

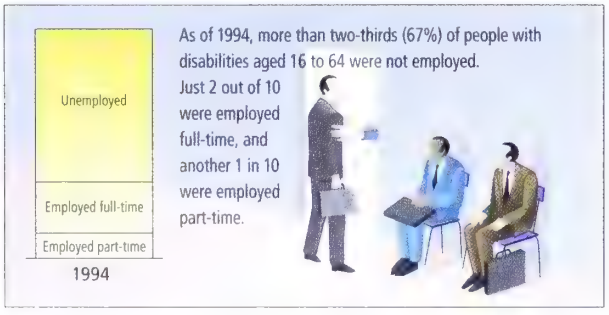
This is the most comprehensive survey of adults with disabilities concerning work and employment issues. Several of the important findings concerning these issues are noted below.

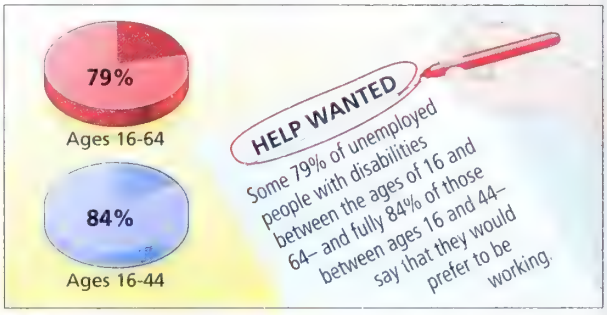
1 Two-thirds of Americans with disabilities between the ages of 16 and 64 are not working. This number shows no improvement since 1986.

- Two in 10 (20%) are working full-time, and 11% are working part-time.
- It is still true, as it was in 1986, that "not working is perhaps the truest definition of what it means to be disabled."

2 The overwhelming majority of non-employed people with disabilities in the working age population want to work.

- Fully 79% of non-employed people with disabilities aged 16 to 64, including 84% of people aged 16 to 44, say they would like to have a job.
- The proportion of these non-employed working age people who want to work has increased by 13 percentage points, rising from 66% in 1986.





3 Six in 10 adults with disabilities (59%) live in households with earnings of $25,000 or less, compared with fewer than 4 in 10 nondisabled adults (37%).

- However, the proportion of employed adults with disabilities with household incomes of $25,000 or less (37%) mirrors that of the nondisabled population.

4 Adults with disabilities who are working are employed in a wide range of occupations:

- 16% hold professional or managerial positions or are proprietors;
- 14% are service workers;
- 13% are clerical or sales workers;
- 12% are unskilled laborers or farmers; and
- 7% are skilled craftspeople.

These proportions are not very different from the employment patterns of employed people without disabilities.

5 Most adults with disabilities who are currently working or are willing and able to work (69%) do not need special equipment or technology in order to perform effectively at work; one quarter (26%) of these adults do need special equipment or technology.

[1] Where applicable, comparisons are made between the findings of this study and a similar 1986 "ICD Survey of Americans with Disabilities" conducted by Louis Harris & Associates, Inc., as well as N.O.D.'s 1991 Harris Survey of "Public Attitudes Toward People with Disabilities."

Louis Harris and Associates conducted this 21-minute survey by telephone within the United States between February 4 and March 3, 1994, among a nationwide cross section of 1,021 adults with disabilities ages 16 and over.

To obtain the full report "N.O.D. Survey of Americans with Disabilities," contact the National Organization on Disability. The report will be available on tape for those with visual impairments.

To obtain reprints of this special advertising section "The New Competitive Advantage," contact the National Organization on Disability. Reprints will be available on tape for those with visual impairments.

6 The most important reasons why working age adults with disabilities are not working (or not working full-time) are:

- Their disability or health problem severely limits what they can do (81% consider this an important reason);
- They need medical treatment for their disability or health problem (58%);
- Employers won't recognize that they are capable of doing a full-time job (40%);
- They think no full-time work is available in their line of work or they can't find it (35%);
- They don't have the skills, education, or training needed to get full-time jobs (32%);
- They would risk losing benefits or insurance payments (31%);
- They can't get affordable, convenient, or accessible transportation to and from work or housing near work (24%);
- They need a personal assistant to help them get to work, or to do their job (24%);
- They need special equipment or devices to do their work, talk to or hear other workers, or get around (16%).

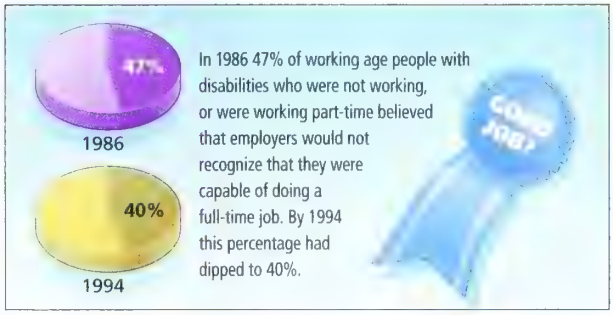
7 A substantial minority of people with disabilities who are employed or willing and able to work confront discrimination, unfavorable attitudes, and physical barriers in the workplace.

- Three in 10 have encountered job discrimination;
- Two in 10 have encountered physical barriers in the workplace;
- Almost half of those working age people with disabilities who are not working believe that employers are insensitive to people with disabilities.

8 Eight in 10 working age adults with disabilities who are unemployed but looking for work (81%) believe that they would have the kind of job they would like to have if they did not have a disability or health problem.

9 One of the most encouraging findings from this N.O.D. survey is that Americans with disabilities are better educated today than eight years ago.

- Three in 4 adults with disabilities now have completed at least a high school education, compared with only 3 in 5 disabled adults in 1986. Furthermore, the proportion of adults with disabilities who have completed at least some college almost mirrors the nondisabled population.



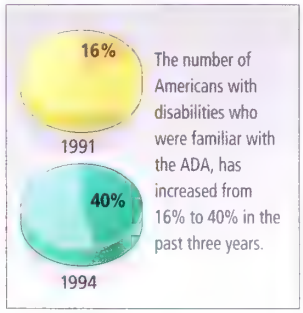
10 Students with disabilities are pessimistic about their job prospects.

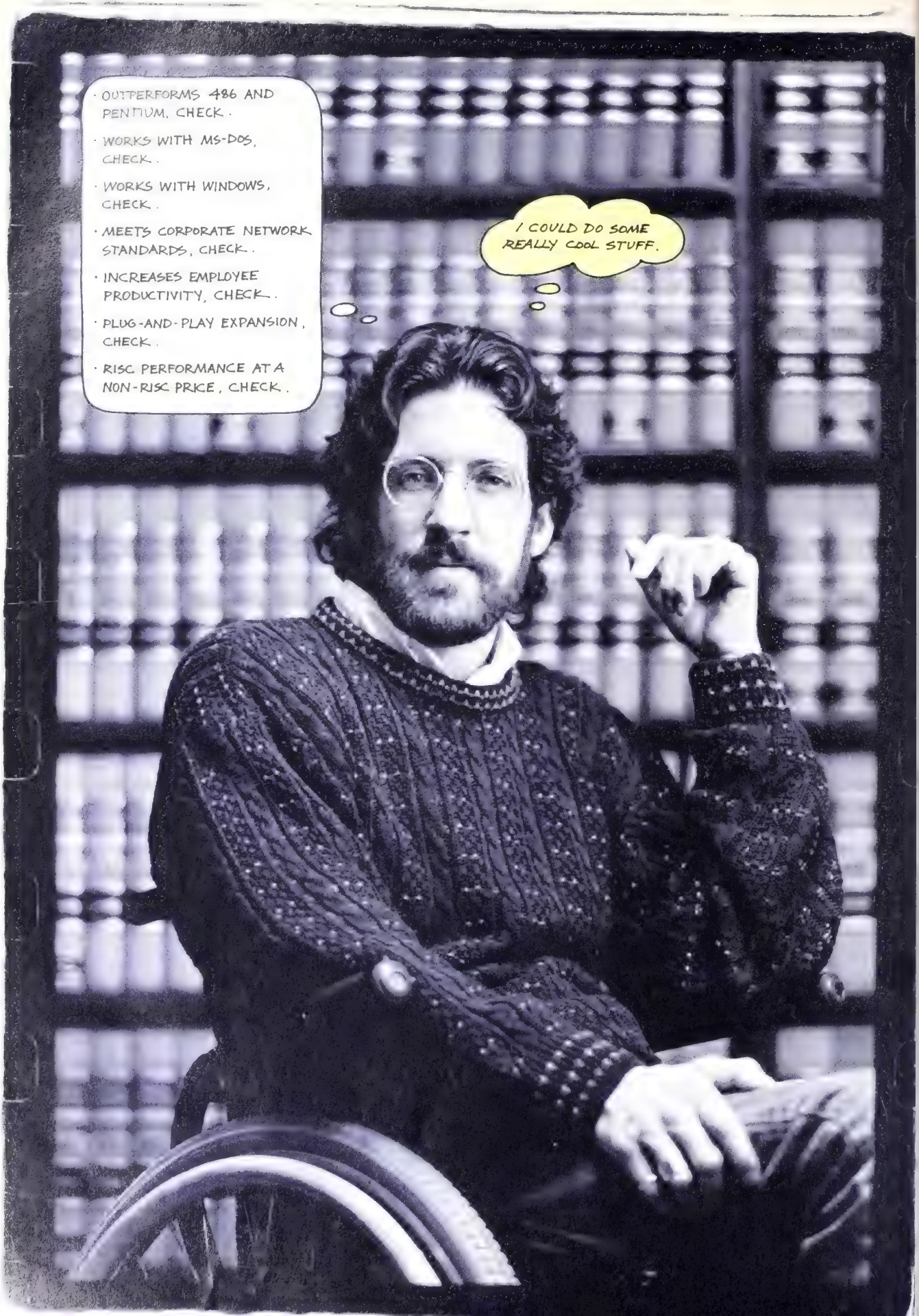
- Half of current students and employment trainees (49%) with disabilities expect to encounter job discrimination because of their disability or health problem when they look for jobs; 43% do not expect to, and 8% are not sure;
- Two-thirds of students believe that their disability will have (or has had) a strong negative (35%) or somewhat negative (31%) effect on their job opportunities.

11 Fear of losing benefits may be an important disincentive to work.

- Almost 6 in 10 adults with disabilities between the ages of 16 and 64 who are not working and are not looking for work report that they would lose income, health care benefits, or other benefits that they currently receive from private insurance or the government if they worked full-time.

12 There has been a significant increase since 1991 in the number of people with disabilities who are aware of the Americans with Disabilities Act (ADA), but half of all working age people with disabilities still do not know about it.

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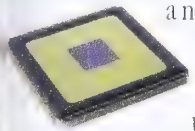

The PowerPC 601 has a lot of power inside it: the combined resources of IBM, Motorola and Apple.

The RISC technology of Power Macintosh brings a whole new level of performance to personal computing. Software written to take advantage of its unique new capabilities, in fact, will run significantly faster than the same programs written for 486 or Pentium processor-based PCs.

Combine the power of RISC with the practical simplicity of a Macintosh personal computer, and the result is more work done in less time, with lower support costs.

The power to run MS-DOS, Windows and Macintosh software.

Many Power Macintosh configurations come bundled with SoftWindows™ from Insignia Solutions, an innovation that lets Power Macintosh run hundreds of off-the-shelf MS-DOS and Windows applications at 386 and 486 performance levels. (Of course, Power Macintosh runs thousands of Macintosh productivity programs, too.)

This is just the most recent example of Apple's commitment to making it easier for MS-DOS and Windows users to take advantage of Macintosh innovations.

The power of RISC for as little as $1,819.*

These days, the whole personal computer industry is buzzing about the potential of RISC processor technology in PCs.

"My next computer will be a PowerPC. I was using Intel-based machines long before the PC was a glimmer in IBM's eye, but as Emerson said, foolishly held consistency is the hobgoblin of little minds.... It's time for a change, and the time is now," wrote Bill Machrone in *PC Week*. "That next machine will probably wear an Apple logo.... Apple appears to be a good six months ahead of IBM in terms of [PowerPC] product development and software integration."

Power Macintosh	6100/60	7100/66	8100/80
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The power to be your best.

From left, the new Power Macintosh 8100/80, Power Macintosh 7100/66 and Power Macintosh 6100/60.

Introducing Power Macintosh.

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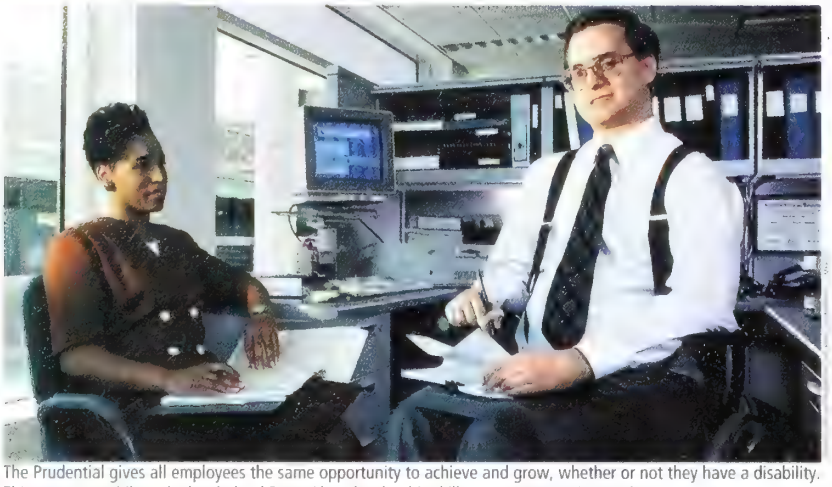

The Prudential gives all employees the same opportunity to achieve and grow, whether or not they have a disability. This corporate philosophy has helped Peter Akos develop his skills as a programming analyst.

The Learning Curve

In *Workforce 2000*, its seminal 1987 study for the U.S. Department of Labor, the Indianapolis, Ind., based Hudson Institute sent shockwaves through the business community with its projections of growing worker and skills shortages by the end of the century. Four years later, *Business Week*'s October 1991 special advertising section,"Willing and Able: Americans with Disabilities in the New Work Force," confirmed these forecasts, arguing that United States employers would have to look to new sources of high-quality workers—including workers with disabilities—if they were to remain competitive in the decade ahead.

"In the 1990s," *Business Week*'s section concluded, "one of the hidden keys to profitability may be a large and growing bloc of Americans—people with disabilities." It went on: "In a decade in which willing and able workers will be increasingly hard to find, the nearly nine million working age Americans with disabilities now outside the job market may be one of the best sources of new employees—period."

For people with disabilities, this was an extremely favorable prognosis. But then, just as the magazine hit the newsstands, came the nationwide economic recession. Headlines warning of worker shortages and skills deficiencies quickly disappeared, replaced by accounts of spreading layoffs, factory shutdowns, and rising unemployment rates. Most businesses, only recently gripped by fears of too *few* workers, suddenly found themselves swamped by too many. The once urgent need to reach out to job applicants with disabilities had all but vanished.

Or had it?

The Fine Print of Change

Those employers who bothered to read the fine print of economic change recognized a vital fact: demographics don't lie. Recessions notwithstanding, the number of young labor-market entrants in the early years of the next century can be no greater than the number of adolescents and children today. That fundamental relationship virtually guarantees that the worker shortages predicted *before* the recent recession, which were based on the historically small cohorts of preteens, will gradually return as the economy regains strength.

The U.S. Bureau of Labor Statistics concedes as much in its most recent labor forecast. "Employment in the U.S. economy is projected to increase by…1.2% annually" between 1990 and 2005, the Bureau notes, or at only about one-half the average annual growth rate during the preceding 15-year period. Slower growth of the labor force, the Bureau notes, is the primary reason for increasing worker shortages to meet employers projected demands.

Skills shortages have been no less successfully vanquished by the recession. A July 1991 report by the U.S. Labor Secretary's Commission on Achieving Necessary Skills (SCANS) uncovered widespread skills deficiencies in reading, communications, and critical thinking among young people who will be the core of the next century's entry-level labor force. If anything, more recent studies indicate, these problems have worsened over the past three years.

Disability-Wise Employers

George Santayana wrote that "those who cannot remember the past are condemned to repeat it." The work force trends just cited make Mr. Santayana's oft-repeated injunction especially pertinent here: those employers who cannot remember the desperate scrambles for good workers of the not-so-distant past are doomed to suffer them anew as recession fades. Unfilled job openings, $10-an-hour wages for counter help, the need to interview 10 to 20 job applicants to find but one who is qualified—these vestiges of the late 1980s will return all too soon to besiege employers who do not start preparing now.

The good news is, people with disabilities are just as capable of filling companies' job needs in 1994 as they were at the decade's start. A small but expanding core of disability-wise employers, eager to build the highest-quality work force possible, have spent much of the last decade learning this fact.

It's a fact that the rest of Corporate America would do well to begin learning for themselves.

A Disability-Friendly Workplace

The Americans with Disabilities Act (ADA) was enacted in 1990 amidst a flurry of publicity, including dire predictions that it would lead to endless lawsuits and cause the cost of doing business to skyrocket. Yet more than two years later, an October 1992 Gallup Poll sponsored by the Electronics Industries Foundation found, fully 42% of employers confessed that they knew little or nothing at all about the Act. Nor were most employers doing much to bring large numbers of people with disabilities into their work forces: almost three-quarters had no explicit company policy for the hiring of people with disabilities, and more than three-quarters had no programs to train supervisors for recruiting and working with employees with disabilities.

While news reports indicate that this record has improved somewhat in the intervening 20 months, most employers still find ADA compliance to be a dark and mysterious terrain. But for a relative handful of visionary firms, who were already working aggressively to recruit, train, and retain people with disabilities long before the ADA became law, the territory has become second nature. *Business Week* reported on many of these firms' path-breaking activities in its October 1991 special section, "Willing and Able." In the three years since then, these efforts have intensified, as we recently found out.

Reaching Out to People with Disabilities

Almost always, employers' efforts to reach out to people with disabilities start with an unwavering commitment from the organization's top management. The U.S. Postal Service epitomizes this approach to employment. "For many years, the USPS has recognized the contributions of people with disabilities in the work force," says U.S. Postmaster General and CEO, Marvin Runyon. "In 1993, our career work force included 37,343 people with varying degrees of disabilities—from those with hearing impairments to wheelchair-users."

Ben Howard discusses computer programming with UPS Employee Information Services supervisor Lucinda Foote.

The same attitude prevails at hotelier Host Marriott. "We would be unwise *not* to tap that source of labor," Host Marriott Chairman Richard Marriott told an ADA conference last December. The restaurant and hotel industry will have an increasingly difficult time attracting qualified workers, he argued, if they don't take advantage of the capabilities that people with disabilities bring to the job market.

Mr. Marriott is surprised that other employers haven't learned this lesson. "There are people out there who can help [employers] train and assimilate workers with disabilities," Mr. Marriott emphasizes. "The programs exist. All employers have to do is...use them."

Putting the Commitment into Action

IBM Corporation is one of the nation's leaders in putting its commitment to

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Robert J. Eaton, Chairman of the Board and CEO Chrysler Corporation

Walter P. Chrysler's fascination with the automobile began with the realization that it was, in his view, "the first machine of considerable size in the history of the world for which every human being was a potential customer."

Well, not *everyone*. Until recently, many people with disabilities simply couldn't enjoy the mobility that motor vehicles made possible. Today, however, it's estimated that more than 7 million mobility-impaired people with mobility impairments who *can't* use public transportation *could* drive a vehicle–if it were converted to meet their special needs.

At Chrysler, we believe that the independence and opportunities made possible by personal transportation should be available to all.

Since 1987, our Physically Challenged Assistance Program (or P-CAP) has provided information for people with disabilities on adaptive driving aids, such as wheelchair lifts and hand controls, and cash incentives for installing them. This very successful program–the first of its kind in the automobile industry–has helped more than 18,000 customers acquire and operate specially-equipped Chrysler vehicles.

We support the efforts of the National Organization on Disability to increase opportunities for people with disabilities. We are particularly proud of the work of Chrysler people in helping make more Americans mobile. And we pledge that we'll continue to build thoughtfully designed, top-quality vehicles that help people with disabilities achieve their goals and dreams.

ROBERT J. EATON
Chairman of the Board and Chief Executive Officer
Chrysler Corporation

A Talented Workforce...

is the need of every company in the country today. **McGraw-Hill** establishes its diverse and talented workforce from all available communities, including the disabled.

Our quest to assure that disabled workers have equal opportunity to find employment with us has led us to:

★ Manage a McGraw-Hill program called Intensive Clerical Skills. The trainees, largely from the disabled and disadvantaged communities, learn typewriting, word processing, business English and math. More than 2200 have graduated from the program established in 1968 and of those, more than 90 percent have been employed by McGraw-Hill or other Business Week 1000 companies.

★ **Just One Break**, an organization that teaches interview techniques to disabled individuals in order to help them find employment. Just One Break also instructs managers on interview skills that will help them hire disabled individuals. Job Fairs, sponsored by Just One Break, help us identify potential employees and hire them.

★ **Federation for the Handicapped**, an organization that helps us staff our headquarters mailroom operations with individuals who are mentally disabled. Over the past 10 years, more than 20 employees have come to us through the Federation; their attendance records show reliability and consistency.

Of our 15,000 employees in the U.S., we estimate that five percent have some form of disability. Of these 14 have identified themselves to us as disabled. To meet their special needs, we make changes in their workplace: we install audio enhancers, for example, to support the hearing impaired. And we revise office space and rest rooms to make them accessible to employees in wheelchairs.

Talent is a priceless commodity. We need it. We look for it. And we have found it in the disabled community.

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recruiting people with disabilities into practice in just this way. IBM, which hired its first employee with a disability 80 years ago, works actively with community-based disability-advocacy groups in every city where it has operations in order to identify prospective employees with disabilities—one important reason why there are now several thousand people with disabilities on IBM's payroll.

Eastman Kodak likewise has established several linkages with community organizations to recruit and hire people with disabilities. One of the company's most fruitful associations is with the National Technical Institute for the Deaf (NTID). Kodak last year expanded its ten-week summer internship program with the NTID to include a high school co-op component that operates during the school year. In the 1993-94 school session, Kodak officials joined with two local schools to hire four special needs students from the co-op program.

"Almost always, employers' efforts to reach out to people with disabilities start with an unwavering commitment from the organization's top management."

McGraw-Hill also works closely with the local community to promote the hiring of people with disabilities. The publishing company provides financial support to Just One Break (JOB), a New York-based organization that trains individuals with disabilities in job-interviewing techniques and helps match up disabled jobseekers with interested employers.

One of the most innovative outreach efforts however, is the "Employability" project of Woolworth Corporation, the multinational retailer. Inaugurated last spring, the project centers around a 30-minute videotape showing individuals with developmental disabilities working in a variety of jobs at all skill levels. The tape's message, notes former Woolworth chairman Harold Sells, who had initiated the program, "is simple: integrating people with developmental disabilities into the workplace makes good business sense."

Changing Minds, Changing Hearts

For employers committed to hiring more people with disabilities, recruitment is only the first step. An equally important challenge can be the need to change the attitudes of the company's nondisabled employees, especially when those attitudes are held by employees in management positions.

A widely cited Louis Harris survey of employers conducted in the mid-80s, for example, found that only 1 in 10 high-level managers held a "strongly optimistic" attitude toward people with disabilities as a potential source of employers. This doubtful view has not been lost on workers with disabilities themselves: nearly half of all people with disabilities, the 1994 Harris survey found, believe that employers will not recognize that they are capable of doing a good job.

In light of these findings, it's worth recalling that workers with disabilities do in fact tend to perform as well or better on the job than their nondisabled colleagues. For instance, in a 1990 survey,

UNUM CORPORATION

James F. Orr III, Chairman and CEO UNUM Corporation

At UNUM, our leadership in the insurance field depends on the capabilities of our people. Our business strength lies in our ability to attract and retain quality workers. And as an employer, we value and respect our employees and are committed to helping them contribute to their fullest potential. As the nation's leading disability insurer, we have spent decades studying the many facets of disability. We understand the impact of a disabling injury or illness and what it means to the employee and the employee's family members. That's why we've created one of the country's most innovative disability management programs to help employers prevent disabilities and to help employees with disabilities return to work as soon as possible.

We know that effective disability management often demands a change in old, stereotypical ways of thinking about disability. Fortunately, the Americans with Disabilities Act should help accelerate that change throughout society.

The ADA was enacted to eliminate discrimination driven by stereotyping and misinformation. By doing so, the law enhances job opportunities, the availability of services, and the overall quality of life for people with disabilities in the United States. Most importantly, though, it increases the pool of talented and qualified employees available to help companies compete in today's challenging marketplace. I encourage our nation's business leaders to embrace the spirit of the ADA and to support Americans with disabilities, one of our nation's most capable groups of employees.

JAMES F. ORR III
Chairman and CEO
UNUM Corporation

managers at the DuPont Company rated 97% of workers with disabilities average or above in job safety, 86% average or above in attendance, and 90% average or above in job performance.

A growing number of companies offer sign-language courses to help nondisabled employees communicate with colleagues and clients who have hearing impairments.

Wanted: Appropriate Attitudes

With its "Focus on Abilities," United Parcel Service has taken a lead in ensuring that its employees and managers recognize and act on these facts. The international delivery-service firm's new human resources guide is filled with probing case studies that educate managers and other employees in appropriate behaviors under the ADA.

UNUM Life Insurance Company of America, headquartered in Portland, Me., takes a similar approach with its new ADA guidebook entitled "Navigating the Americans with Disabilities Act of 1990." The 27-page manual covers such critical topics as the definition of disability, the implementation of the ADA, and the "do's" and "don'ts" of behavior toward individuals with disabilities. Like UPS's "Focus," UNUM's resource book uses a number of case studies to bring its guidelines to life.

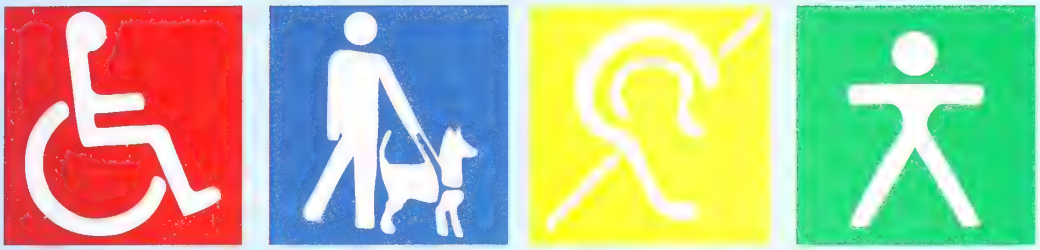
Corporate efforts aimed at fostering more understanding attitudes among their employees aren't confined to guidebooks and case studies, though. Consider:

- U.S. West, the Western states telecommunications company, sponsors the development of workplace-based resource groups for employees. "U.S. West Friends," dedicated to providing support to people with disabilities, is one such group, now boasting more than 100 members.
- Gannett Broadcasting has formed a Diversity Committee at each Gannett TV and radio station to help create a working environment in which all employees can reach their fullest potential.
- Allstate Insurance Company conducts a sensitivity-awareness seminar for managers in several states through video conferencing.
- RJR Nabisco, the consumer-products conglomerate, runs lunchtime "Aware" programs to help educate its employees in disability issues.

Eliminating Barriers to Work

Unfavorable workplace attitudes toward people with disabilities often result from a fear of the unknown. But many employers have had a fear, not of the unknown, but of what they thought they *knew*—specifically, that bringing people with

At JCPenney, the future is...



totally accessible.

In the final analysis, the future is a people issue.

At JCPenney the focus is always on a person's abilities, not disabilities. On what a person can do.

Our goal is not to examine each department for specialized jobs that disabled people can perform, but to see what accommodations we can make to open up virtually any position in the company to a qualified person who just happens to be disabled.

We believe that by opening the doors of opportunity to disabled individuals, we are serving the best interests of our company and our future. Our approach is humanistic, and we continue to heighten our sensitivity in interviewing, employing, promoting, and communicating with people with disabilities.

And it's not a one-way street. W. R. Howell, Chairman and CEO of JCPenney, states, "In the competitive job market of the 90s, companies will need all the good people they can recruit. The pro-active hiring and accommodation of qualified people with disabilities represents an opportunity that astute organizations will increasingly seize upon."

JCPenney

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MARRIOTT INTERNATIONAL

J.W. Marriott, Jr.
Chairman and President
Marriott International

At Marriott International, we respect and value work force diversity. Our company's commitment to developing human potential can be traced back to a small root beer stand opened by my father in 1927. Today, people with disabilities comprise approximately 6% of Marriott's work force. We are involved in numerous projects around the United States to recruit and train individuals with disabilities.

In 1989, my family established the Marriott Foundation for People with Disabilities so that others could benefit from our company's knowledge and experience. The Foundation developed and operates "Bridges...from school to work," a transition program for young people with disabilities. Bridges works closely with employees, schools, students, and parents to develop and support competitively paid internships for special education students in their last year of high school.

Currently operating in Chicago, Los Angeles, and the San Francisco and Washington, D.C., regions, Bridges serves approximately 500 young people each year. More than 80% of the students who complete Bridges internships receive offers of ongoing employment. The result: an important first step into the workplace for young people with disabilities. And, for employers, first-hand experience that hiring people with disabilities makes good business sense.

Building on this success will continue to be a priority for Marriott. For if we are to reach our full potential in our company, and in our society, we must have *everyone's* contribution.

J.W. MARRIOTT, JR.
Chairman and President
Marriott International, Inc.

Working in the electronics industry is one of several career opportunities offered to people with disabilities by the Long Island-based National Center for Disabilities Services.

disabilities into their work forces would require costly workplace accommodations. In the 1992 Gallup Poll for the Electronics Industries Foundation, for instance, 1 in 5 employers said that the lack of special equipment, the cost to build or renovate facilities, or the cost of training was an important reason why they had not hired people with disabilities in the past.

As it happens, these accommodation costs are significantly overstated. In the just concluded N.O.D. Survey of Americans with Disabilities, fewer than 1 in 4 workers with disabilities reported facing physical barriers of any type that would have to be modified at their place of employment, and only 1 in 4 said that they needed special equipment of any kind to do an effective job—usually only a personal computer or specialized chairs or furniture. Indeed, careful studies by the President's Committee on Employment of People with Disabilities (PCEPD) and other groups indicate the 80% of job accommodations for people with disabilities cost less than $500, about 60% cost less that $100, and most cost nothing at all.

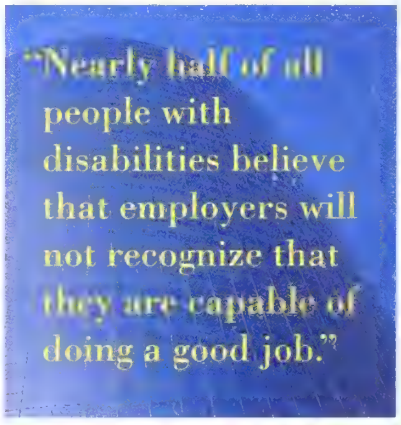
Simple and Inexpensive

Although many companies *have* carried out extensive and costly architectural remodeling projects to accommodate people with disabilities, the great majority of employers have found that simple and inexpensive changes are all that are needed:

- Dayton Hudson, parent company of the Target and Marshall Field's retail stores, reduced the height of cash-register stations so that cashiers in wheelchairs could more easily reach them. The cost? "Virtually nothing," one official boasts.
- Westinghouse modified drawing tables for mechanical designers with physical disabilities, and installed visual safety signals for its hearing-impaired workers.
- When UPS discovered its employees in wheelchairs couldn't clear the overhang in the van area, the company solved the problem by moving the van access to another entrance—at a cost of only $100.
- MetroHealth System in Northeast Ohio installed a modem on the home computer of an employee with a disability so that he could "telecommute" on days when it was not possible for him to leave home.

Accommodations in Groups of One

As they have become aware of the benefits of bringing more people with disabilities onto their payrolls, a growing number of employers have sought to make relatively



simple and inexpensive accommodations like these a regular part of the employment process. "We provide the tools workers with disabilities need to perform the job, just as we provide tools and training to all our people," explains JCPenney Area Audit Manger Scott Robertson of his

Robert F. Armstrong, assistant vice president, NationsBank Information Systems, is using his screen reader (a voice reading each line on the computer screen).

company's accommodations policy.

United Parcel Service handles accommodations systematically through a companywide ADA Committee it created in 1992. One of the committee's first tasks was to review 28 of the most common jobs at 2,000 UPS work sites, carefully distinguishing the essential job functions from those that could be modified or assigned to someone else. Previously, applicants with disabilities had risked being disqualified even if the functions they could not perform were tangential to their jobs. Now, interviewers look only at core job tasks.

But elaborate internal mechanisms like these aren't always necessary for uncovering useful job modifications. Even employers strapped for personnel or funds can find innovative ways to accommodate applicants with disabilities. One of the best resources in this regard, say the experts, is the PCEPD's Job Accommodation Network (JAN). Believing that accommodations "come in groups of one," the Morgantown, W. Va. based organization helps employers identify effective accommodations for specific circumstances, drawing on the experiences of hundreds of other employers.

Computing without Boundaries

One high-tech accommodation that's receiving increasing attention is the personal computer. As *Business Week*'s 1991 special section, "Willing and Able," concluded, personal computers are "fast becoming a tool for self-fulfillment. Computers allow people with disabilities not only to *function* in the workplace, but to *excel*—often beyond their most optimistic expectations."

In the words of Alan Reich, president of N.O.D., a quadriplegic who uses computers for many purposes, "It is important for people with disabilities to be able to have high-quality computers that are reliable. And nothing is more important than 'compactness,' I have found. That's why computers like the Compaq Contura Aero are so great. It only weighs three and a half pounds but has the power and ease of operation of much larger computers."

Despite these obvious advantages, computers are often overlooked as an accommodation solution precisely *because* they are so high-tech, insists Dr. Alan Brightman, manager of Apple Computer's Worldwide Disability Solutions Group. "A lot of people have spent years trying to categorize personal computers as something special," the head of the Cupertino, Ca., based unit says. "But if we're going to make the computer a true tool for accommodation, we need to *despecialize* it. The computer, after all, is just another aid to getting the job done."

To promote this view, Apple Computer has adopted the philosophy that people

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For Persons with Disabilities

The General Motors Mobility Program can help you maintain your independence. Just make a toll-free call. The GM Mobility Assistance Center will:

- Identify local driver assessment centers,
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- Send an informative videotape, "On the Move Again,"
- Suggest which General Motors cars and trucks might work best for you.

Then, if you choose to buy or lease a new GM vehicle or dealer demo model, we'll reimburse you for the cost of adapting it – or for the reinstallation of your own adaptive equipment – up to $1,000.
Call 1-800-323-9935 (TDD users: 1-800-TDD-9935) or contact your Chevrolet, Pontiac, Oldsmobile, Buick, Cadillac, or GMC Truck dealer to find out more.

PART

UPS'S "FOCUS ON ABILITIES" PROGRAM

Two years ago, UPS Chairman Kent C. "Oz" Nelson called on business colleagues in the Atlanta area to promote the positive aspects of the Americans with Disabilities Act (ADA) by altering the way businesses define "ability." He illustrated his point by relating the story of Ben, a UPS employee who uses a wheelchair.

Shortly after UPS moved its worldwide headquarters to Atlanta, Ben arrived to be interviewed for a job. The UPS manager conducting the interview determined that Ben had the skills UPS needed and made him a job offer. Ben accepted even before the manager had a chance to tell him about the salary.

"You don't understand," said Ben, "No one has ever offered me a job before. I don't care about the salary. I'm just happy to be given the opportunity."

Ben brought a number of skills to the workplace, along with a strong determination to succeed. Most important to UPS, he read computer programming books by the score and dabbled in the science by creating his own data base and math science programs.

"The truth is, many people with disabilities have learned to compensate by developing other attributes," Mr. Nelson told the audience of business people. He urged executives to look at what business could gain, rather than what it might have to invest, by employing workers with disabilities.

The corporatewide management-training program that helps UPS comply with the provisions of the ADA is fittingly entitled, "Focus On Abilities."

with disabilities don't need a *personal* computer as much as they do a *personalized* computer—one modified by enhancements suited to their particular disability. To make such enhancements widely available, Apple this past spring opened up "Aisle 17," a mail-order disability solutions store that provides a "one-stop shop" for Macintosh computers and assistive technology packages bundled at competitive prices. "There's never been a store like Aisle 17," the company claims. "It's a place dedicated to computing without boundaries."

Sharing Information and Ideas

Ultimately, the most potent weapon against the barriers that many people with disabilities face in the job market is *information*. The equation is simple: employers who know how to reach out to job applicants with disabilities, who know how to correct subtle but adverse workplace attitudes, and who know how to make easy and inexpensive job accommodations are far more likely to take these critical steps than are companies gripped by fear and ignorance.

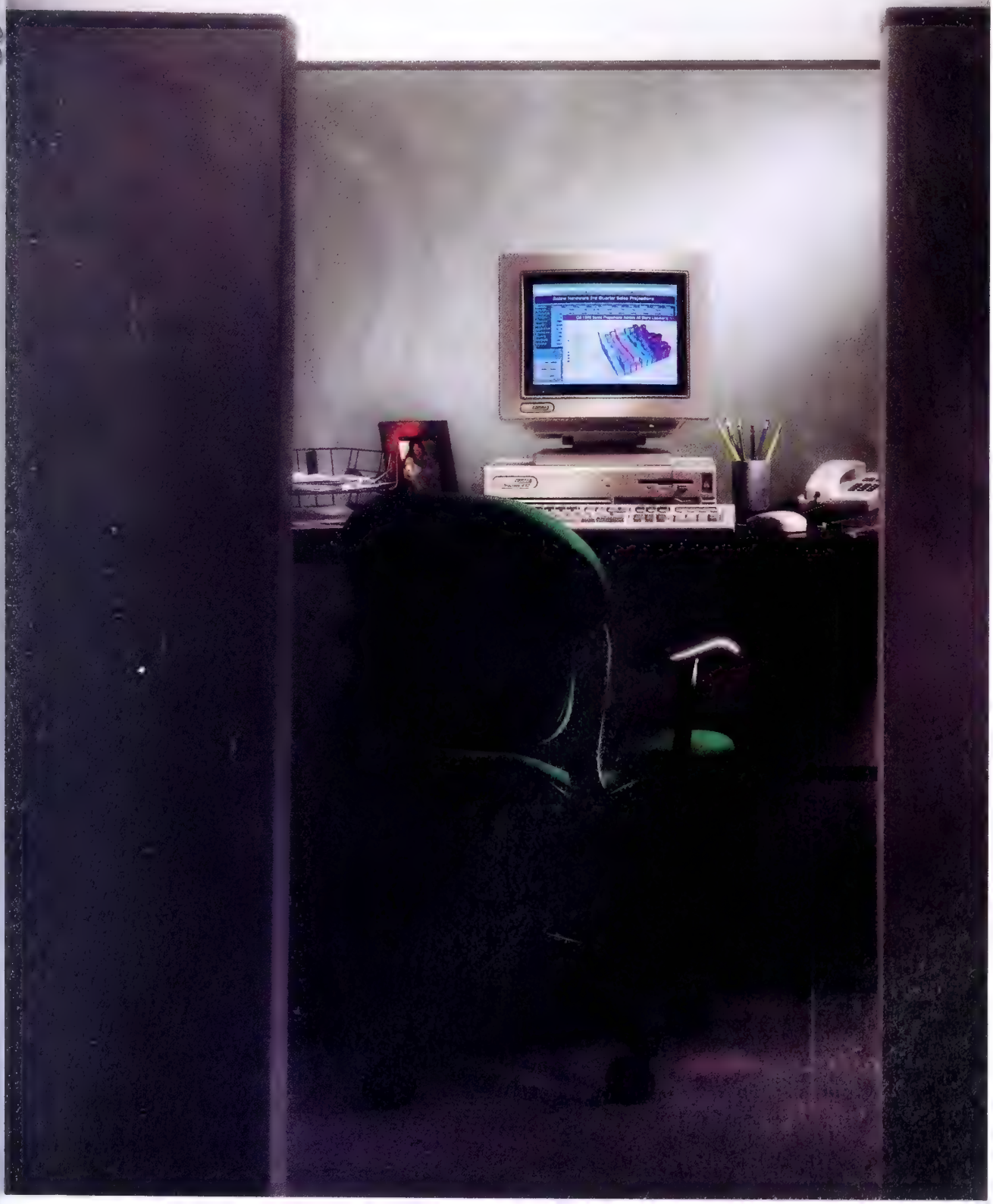
The National Organization on Disability has taken the lead in producing the kind of baseline information these companies need through its Disability 2000 – CEO Council. The more than 250 members of the Council share ideas and information with each other through N.O.D. about how to effectively promote the full participation of people with disabilities in employment and business. "CEO Council members represent the leading edge of American business," Martin Walsh, the Council's director, observes. "Not only are they good corporate citizens, but many are pioneering innovative disability employment and training programs that increase productivity and provide models for other enlightened companies."

A Top-Down Commitment

As important as they are, however, none of these ideas or resources are as powerful as a single initiative that any employer, no matter what its size, can adopt: a top-down commitment to building a truly disability-friendly workplace. The credo enunciated by Oz Nelson, CEO of United Parcel Service, is a statement of principle that all American companies could profitably follow. We must begin "to provide opportunity to people on the basis of what they can do," Mr Nelson told an N.O.D. conference on the ADA in Atlanta, "rather than deny it based on what they cannot do."

Jeanne Lindelow, who is blind according to legal standards, is routing compliance coordinator in the transportation corporate department of Glaxo, Inc.

First You Gave Us A Desk.



Now We Want To R

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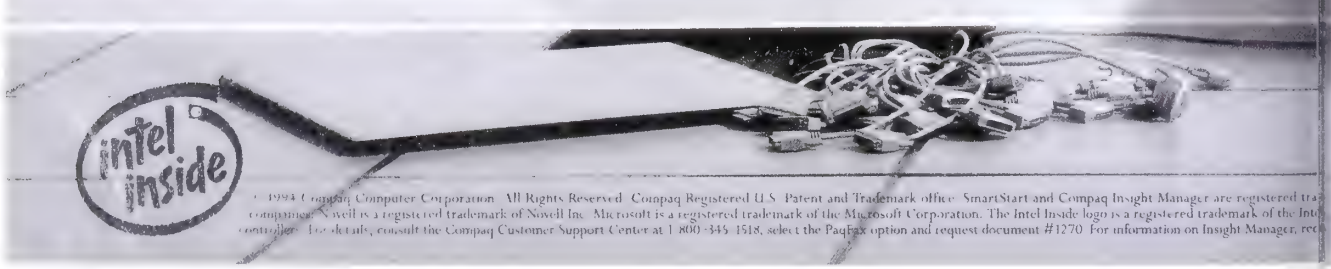
So, as your trusted PC company, we'd like to refer you to a solid, aggressive systems company: Compaq.

You may not be aware, but last year we provided over 63% of the world's superservers.[1] That's because our advanced systems can actually outperform mini-computers costing many times more, while delivering enterprise-class reliability. They can also radically cut per-transaction and maintenance costs.

Our experience, fueled by partnerships with such networking leaders as Novell, Microsoft and SCO, has helped us develop an integrated family of networking products – from the new ProSignia VS (which offers true server functionality at a desktop price) to the high-availability ProLiant line.

These systems can easily run today's emerging business-critical applications. They also reflect some refreshing common sense: Namely, there's no reason to downsize from big, complicated computers if you're



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going to end up with small, complicated computers.

So Compaq's networking solutions bring you the same ease of use we've brought to the desktop. Our CD-based SmartStart technology vastly simplifies the most complicated part of the setup process – reliably configuring and fully optimizing your system.

Our servers are built to keep running, even when being serviced. The Compaq Insight Manager monitors 800 critical measurements of server health, and our Pre-Failure Warranty[2] ensures free replacement of key parts before potential problems turn into real ones.

And since you'd rather not use your business as a test lab, we use our test lab as a test lab. Here, in real-life, high-volume networks, we work with our industry partners to ensure the highest compatibility and keep our commitment to open systems. So you'll never be boxed in, forced to deal with any one manufacturer.

If you're interested in receiving specifications for Compaq systems immediately via fax, all you have to do is call us at 1-800-345-1518, choose the free PaqFax option and request documents #4001 and #4003. And if you think we worked hard at the desk job, wait till you see what we do for you next. COMPAQ

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UNITED STATES POSTAL SERVICE

Marvin Runyon, Postmaster General and Chief Executive Officer US Postal Service

The U.S. Postal Service, a leader in both government and industry in employing people with disabilities, has 37,000 employees with disabilities. For the future, we are committed to building on our tradition of equal opportunity and work force diversity.

For any organization to succeed, it must tap into the varied talents and abilities of the work force. All people must be given the chance to do the job they are capable of doing.

Sometimes, the biggest obstacles that employees with disabilities must overcome are the attitudes of people without disabilities. All employers must continue to bring down any barriers like these that hold back the potential of our employees.

We have very dedicated people working for the Postal Service—especially those who have disabilities. The Postal Service is made up of people who care about serving their neighbors and this nation, people who want to do a good job, people who want this organization to succeed.

They don't sit back and wait for something to happen. They make things happen. I have a saying about that. One percent of the people make things happen. Nine percent watch things happen. The other 90 percent wonder, "What happened?"

Our employees with disabilities are in the first group. They are making good things happen for the Postal Service. They are setting the example.

MARVIN RUNYON
Postmaster General and Chief Executive Officer
United States Postal Service

Interviewing Tips

The job interview is the time of first impressions, for both employer and job applicant. To most managers and personnel specialists, the interviewing process is a routine matter, nothing to be concerned about—until an applicant with a disability walks through the door. Then, even some of the most experienced interviewers become anxious and uncertain, afraid either that they'll offend the prospective employee (and perhaps subject themselves or their firm to a lawsuit), or that they'll be too reticent to ask the tough questions they normally would pose to a nondisabled candidate.

Some Commonsense Guidelines

It doesn't have to be that way. By following a few commonsense guidelines, managers and personnel officials can ensure that the job interview is a pleasant and informative experience for all parties concerned. Here, adapted from a "pre-interview checklist" compiled by the Employers' Committee of the President's Committee on Employment of People with Disabilities, are some of the most important steps to consider:

- Make sure both the building and room where the interview will be held are accessible to people with all types of disabilities.
- If the interview is an exploratory one, focus on the applicant's skills, knowledge, and abilities, rather than on his or her potential work limitations or need for accommodations.
- If you are interviewing for a specific position, be ready to distinguish between the job's "essential" and "tangential" duties. Doing so will allow applicants to determine on their own whether any accommodations are needed.
- If the applicant is not technically or professionally qualified for the position, end the interview. If the applicant *is* qualified, feel free to discuss in an open, honest, and straightforward manner how he or she plans to perform specific on-the-job duties.
- Don't ask what caused the person's disability or how he or she will get to work.

As a student intern, Vikki Washington edited technical manuals at the Hewlett-Packard Company through the *Bridges...from school to work transition program* developed by the Marriott Foundation for People with Disabilities.

Interviewing Etiquette

To reduce your apprehension when interviewing someone with a disability, keep these additional suggestions in mind:

- Shake whatever the person offers in greeting—a hand, prosthesis, or elbow.
- After the initial greeting, sit down so that applicants who use a wheelchair won't have to crane their neck to make eye contact.
- When interviewing a person with a hearing impairment, try to keep your face out of the shadows and your hands away from your mouth as you speak.
- If a sign-language interpreter is present, remember to look at and talk to the person you're interviewing, not the interpreter. If no interpreter is available for an applicant who is deaf, ask the candidate how he or she would like to communicate.
- If an applicant's ability to read, write, or handle documents is limited, be prepared to offer assistance in completing paperwork.
- Relax and make the applicant feel relaxed. Don't be afraid of making mistakes. At the same time, remember that job candidates (particularly those applying for professional positions) must be expected to assume an equal share of the responsibility for making your interaction with them comfortable.

A Strategy for Success

With the passage of the ADA and the continuing creation of new assistive technologies, an N.O.D. report concluded last year, the accessibility hurdle for people with disabilities "is considerably lower than it once was, and will continue to fall" in the years ahead.

Few developments could be more promising than this for people with disabilities eager to become full participants in the mainstream of American life. But this future will come into being only if Corporate America as a whole makes the kind of top-down commitment to recruiting, hiring, training, and promoting people with disabilities that is reflected in the efforts of the companies profiled here.

Seven Steps to Success

Businesses interested in bringing this future about would do well to adopt seven key principles as an integral part of their corporate philosophy:

1 Recognize the opportunity offered by workers with disabilities. You can't hire people if you don't know they exist. Many employers haven't actively recruited individuals with disabilities in the past because they simply haven't thought about it. Employers who want to remain competitive in the 21st century might heed a word to the wise: *start* thinking about it.

The inclusion of people with disabilities in the news media, entertainment and advertising have helped to acquaint nondisabled Americans with the capabilities and needs of people with disabilities.

2 Develop a strategic recruitment plan. Don't wait for applicants with disabilities to arrive at your door. You wouldn't attempt to raise capital or sell your products without learning everything you could about the market—and then appealing to it in the most aggressive fashion possible. You shouldn't approach the hiring of people with disabilities any differently.

3 Familiarize yourself with disability groups in your area. Most people with disabilities find jobs through want ads and word-of-mouth, in large part because employers generally aren't aware of local disability placement, training, and advocacy groups. Companies that take the time to make solid connections with these organizations will therefore have an almost unchallenged direct line to some of the most job-ready people with disabilities looking for work.

4 Create a disability-sensitive workplace. Employees with disabilities say that physical barriers are usually far less of a hindrance to their on-the-job success than attitudinal barriers. But to be effective, increased attitudinal sensitivity can't be just a corporate buzzword; it has to be the order of business from the very first job interview, and must filter through every level of the company.

5 Make every economically feasible accommodation. For the great majority of employees with disabilities, job accommodations are easy, uncomplicated, and inexpensive—and typically require little more than ingenuity and common sense. But the payoff can be a high-quality worker you might have had little chance of hiring otherwise.

6 Stay on top of technology. While many accommodations are no more technological than a hammer and nails, emerging technologies are often able to "level the playing field" between workers with and without disabilities in ways previously thought impossible. What's more, most high-tech solutions actually cost very little, especially compared to the benefit gained.

With the removal of physical barriers in the work place, employees with disabilities are able to become full participants in corporate decisionmaking and profitability.

7 Give employees with disabilities the respect they deserve. In the end, the deciding factor in hiring a person with a disability must be the same as for hiring a nondisabled applicant: "Can this person do the job?" You should make every accommodation possible for workers with disabilities, but don't hesitate to demand the same performance of *all* of your employees, whether or not they have a disability. Remember: respect is the most valuable wage you can pay to any employee.

Within Our Reach

The result of these actions? More productive companies, to be sure, but more than that, a society in which having a disability is no longer a ticket to America's sidelines. "The goal of full participation is within our reach," says N.O.D.'s Alan Reich, "if we fully commit ourselves to bringing about a world in which employers and jobseekers alike focus on abilities rather than disabilities."

"The New Competitive Advantage" was written by Kevin R. Hopkins, who also authored "Willing and Able," *Business Week*'s October 1991 Special Section on disability.

N.O.D. Consultants: Brock Brower and Arlene E. Anns.

General Motors.

GM MOBILITY PROGRAM

"The GM Mobility Program can help you a lot. I know because my mom is part of it."

General Motors Corporation © 1994

Tammie Groth doesn't believe in obstacles. An honor roll student, Tammie travels around the country with her mother Connie, to conventions and conferences concerning people with disabilities. Connie is one of the many GM employees whose own lives are affected by physical disability. Their valuable insights help make the GM Mobility Program work. If you need to adapt or modify a vehicle, the program offers the information you need and financial support—not a sales pitch. Transportation means independence. And that's something the people of General Motors know from their own experience.

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KOL, DUDE: PIRITS GET HIP

dka and Scotch importers are targeting twentysomethings

ge may not be everything. But in the rits business, it's close. For Michel x and Guinness PLC, that's a prob-. Roux and Guinness are working fe-shly to court young drinkers for two lining brands—Stolichnaya vodka and var's Scotch. And they're doing it in inctly different ways.

OLI WITH TWIST

Michel Roux seems to like the idea of having a prop. He picks up the tle of Stolichnaya vodka set before and gazes at it, holds it up to the t, turns it around. As he caresses ne begins to talk, almost to himself, ut how he intends to turn Stoli into vodka of choice for hip, young trend-ers. He'll start by cleaning up Stoli's el to make it stand out on the shelf. reds will be brighter. "Stolichnaya" be embossed instead of printed. Un-essary detail will be eliminated. But illustration of the Hotel Moscow will . "What I'm selling," Roux sums up, Russian authenticity."

Focusing on tradition is a switch for the voluble, 53-year-old French émigré, who is known for his cutting-edge marketing style. As president of Carillon Importers Ltd., a unit of Grand Metropolitan PLC, he has recreated the images of such spirits as Grand Marnier, Bombay Sapphire gin, and, most notably, Absolut vodka. His campaign for Absolut, which featured artists' depictions of the Absolut bottle, turned the obscure Swedish vodka into one of the hottest brands of the 1980s. But last fall, Roux was jilted when Seagram Co. snatched away Absolut's U.S. marketing rights.

Now Roux is back, thirsting to fight the vodka wars. PepsiCo Inc., which owns U.S. marketing rights to Stolichnaya, has tapped him to reenergize the stodgy, lackluster brand. His goal: to triple sales to 3 million cases in two years. His earlier work will make that hard. Stolichnaya has fallen far behind Absolut (chart).

But Roux has plans, comrades. This summer, he will launch a $5 million ad campaign for Stoli, featuring the bold colors and geometric shapes of Soviet Constructivist-style poster art. Roux has commissioned six little-known Russian artists—such as Eugeni Mitti and Konstantin Jouravliev—to contribute to the effort. Who better than Russian artists, figures Roux, to evoke the hard-edged, Soviet style of the 1920s and 1930s? It's Russia as artistic statement. And Russia is vodka.

"DAVID AND GOLIATH." Roux has thrown himself into the task. He has stripped the Absolut art from the walls at Carillon and replaced it with some of the Stoli-inspired artworks that have been sent to him in recent months by artist friends. Among the ones on display: a Soviet-style poster bearing a stylized stick figure holding a bottle of Stoli with the legend "Post-Absolutism" across the bottom. Will he use it in an ad? Roux only smiles. As sales increase, he says, the ads will become more daring. But he claims he's not worried about Absolut. "The best way to compete is to ignore the competition," he says.

In many ways, his plan to rehabilitate the Russian vodka is the same one he used for Absolut: art-inspired ads and tie-ins to high-profile causes such as hunger and AIDS. Consultant Tom Pirko of Bevmark dismisses the strategy as too similar. "Word in the industry is that Michel is a one-trick pony," he says. "To compete with what he created is going to take a new dimension in thinking." And Roux will be fighting with a smaller war chest. His total $10 million ad budget, while twice the level of 1993, will be split among three brands. There will be a campaign for Cristall, Stoli's upscale vodka, and ads with interracial couples and "downtown" types for the low-end Priviet. More than $15 million was spent last year on Absolut alone.

Roux is counting on help from friends in the magazine industry who are grateful to him for placing Absolut ads when they were starting out. Roux hopes to cash in on some of that goodwill to stretch his budget. "It's like David and Goliath," says Marvin

ABSOLUT POWER

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Marketing

R. Shanken, editor and publisher of *impact*, a liquor-industry magazine. Wh one difference: Roux will reap the be fits of his parent's distribution netwk. Grand Met is No. 1 in U. S. spirits v ume, while Seagram's is No. 4. Shan thinks Roux will make Stolichnaya real contender."

Roux clearly loves the attention. "P ple in the industry should be questio me," he says. "I question me." But o to an extent. "He's incredibly autocrat says an ad-agency executive fami with Roux. "He tells people what wants, and then he gets it." What wants right now is to be back on again. Absolutely.

By Julie Tilsner in New Y

DEWAR'S NEW PROFILE

At Chaz & Wilson Grill on Manh tan's Upper West Side, the barte er is passing out drinks that would ma Scotch purists pass out cold, such Dewar's margaritas and Dewar's sou But he's getting few complaints. T twentysomethings not only lap up potions being given away as part o Dewar's promotion. They also think Scotch—which they normally associ with stuffy old men—adds a tasty ki "It's free—first and foremost," s Charles Waldron, 24. But he says would consider buying a Dewar's sour the future. "Why not?"

It may be a lark to bar-goers, h sampling events such as this are seri business to Guinness PLC, the make such premium Scotches as Dewar's a Johnnie Walker. Scotch consumption the U. S., the industry's largest mark has halved since 1980, dropping nearly million cases a year. Only 1% of the v ume is drunk by people 20 to 29, cording to the trade publication *Impa* And more than half is drunk by peo over 50. As the world's biggest Scot producer, accounting for more than h of the $3.5 billion market, Guinness d perately needs to recruit young drinke If that means starting them off on s ary concoctions instead of the traditi al straight-up or on-the-rocks, well, much for tradition.

DEAD DRINKERS? Guinness believ strongly enough in the strategy that doubled Dewar's U.S. marketing bu get to $15 million this year. And t month in Britain, where Scotch has a suffered a battering, it is launching $23 million campaign for its Bell's Ext Special brand that will target 25-to- year-old drinkers. The crusade to c vert younger drinkers is crucial to Cha

Anthony A. Greener's plan to re- e Guinness' profit slide. Roughly of the company's earnings come n Scotch. Last year, those profits fell , to $1 billion, on sales of $7 billion. cotch's stumble is an example of the s of not questioning your assump- s. For years, marketers looked at ies showing their drinkers were a long in the tooth and assumed that ch was a taste one acquired at a ain age and station in life. They wrong, Dewar's marketers found n they analyzed trends. People tend xperiment with five to seven types rinks in their 20s, then prune back ney age. Scotch hadn't been part of nger drinkers' menu for years. And associating Scotch with aging power ers didn't help. Lehman Brothers in one report, wondered whether one realized that in 25 years Scotch kers could all be dead.

ow someone does. Dewar's market- have given away Scotch-based mixed ks to some 200,000 drinkers at 1,000 pling events in bars and nightclubs he East Coast since last fall. New created by Leo Burnett Co., are aimed at youngish drinkers. "You fi- have a real job, a real place, and a boyfriend. How about a real drink?" of the ads asks. Bell's will get simi- reatment in the British push: sam- g events, offering Bell's with blue ucao served with a swizzle stick, and in trendy magazines.

ewar's marketers are encouraged arly results. Tracking studies show reness of the brand is up. In addi- about two in three drinkers in bars ng the sampling events try the tails; 40% come back and buy a sec- round on their own dime. But turn- around this two-decades-long slide 't be easy, admits Dominic Brand, up product director for Dewar's. s is the start of a very long-term ess."

hat could be a problem. Guinness chalked up a history of extraordi- earnings growth, thanks to its abil- o regularly ratchet up prices. But recession drove consumers to cheap- pples—and forced Guinness to follow, ing prices on its spirits. Gross mar- on spirits dropped to 25% last year, 30% in 1992. Insiders, rival execu- s, and analysts foresee a fierce com- tion among the various labels for keting dollars. "There's a lot of talk it building brands," says one Guin- exec, "but the reality is that Tony ne most bottom-line manager in the ness." In other words, Dewar's mar- rs better get those twentysome- gs to drink up—and soon.

y Julia Flynn in London, with Jona- Berry in New York

BREITLING
1884

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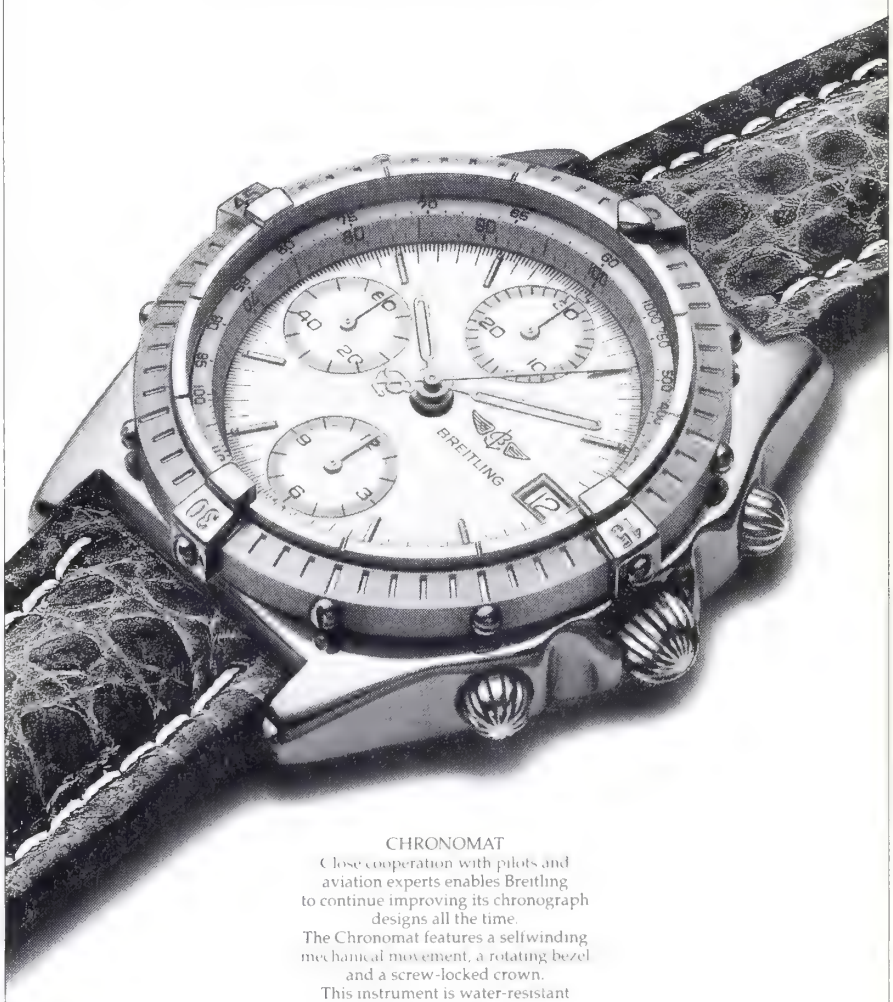

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WHILE ITT LUMBERS, ITS STOCK HAS LEGS

How CEO Araskog keeps investors coming back for more

When ITT Corp. Chief Executive Rand V. Araskog traveled to Washington on Apr. 26 to accept Chile's highest civilian honor, the rank of *Comendador* in the Order of General Bernardo O'Higgins, he seemed to be closing one of the more embarrassing chapters in corporate history. In the early 1970s, ITT was accused by officials in Santiago of tampering with Chilean elections to protect its assets from nationalization. But thanks to the $25 million ITT has since donated to improve Chile's economy, the company is back in that government's good graces.

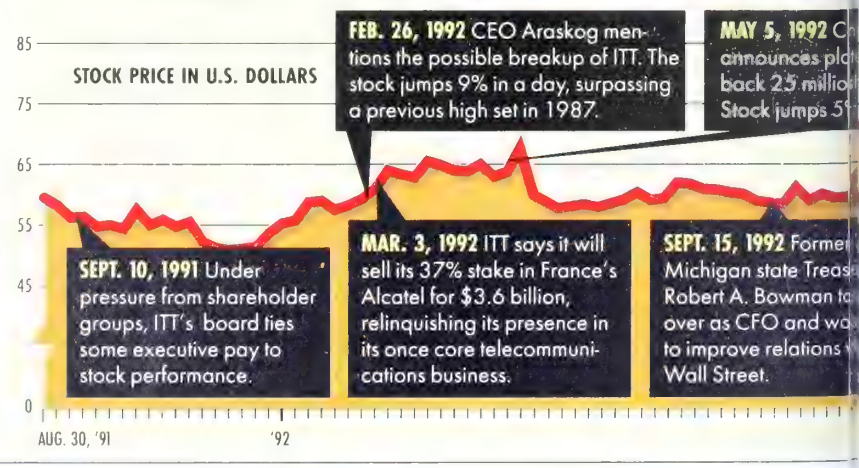
Winning over the Chileans is nothing compared with the détente Araskog has achieved with Wall Street. For years, investors watched in dismay as ITT's stock languished while Araskog and his lieutenants were lavishly compensated. Then, in 1991, activist shareholders pressed the board to link executive pay to the company's stock price. It worked like a charm: ITT's stock is up 46%, to 84¾, in the span of two years. And the New York-based conglomerate now finds itself held up as a model of corporate governance by shareholder groups such as the California Public Employees' Retirement System (CalPERS), once Araskog's harshest critic. "We use ITT as a shining example of how a company can turn around," says Richard Koppes, CalPERS' general counsel.

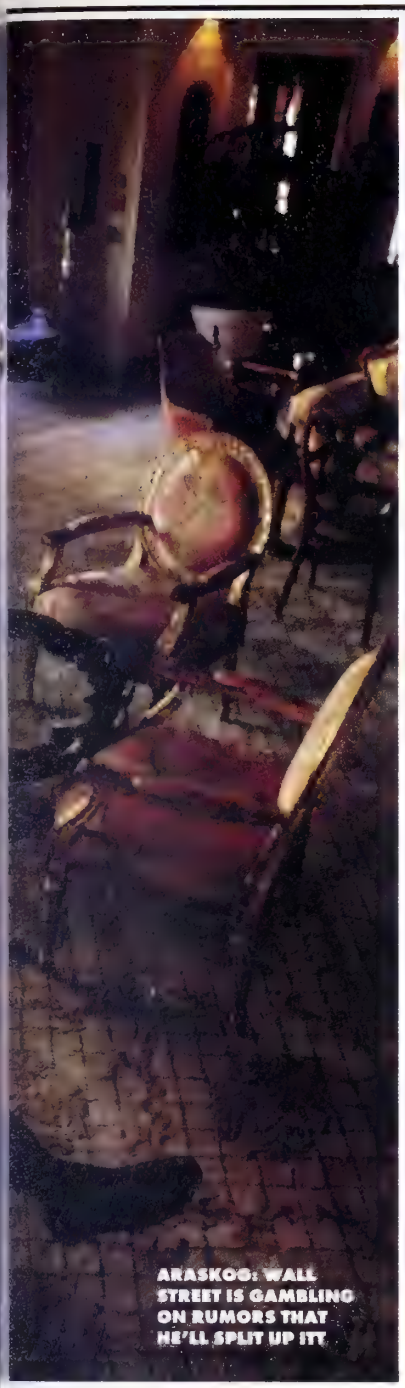
Maybe so. But ITT's newfound popularity with investors doesn't reflect much of a fundamental turnaround in its businesses. True, the company rebounded from a dismal 1992, when it took huge write-offs and restructuring charges in most of its operating units. Last year, it earned $913 million, compared with a loss of $885 million in 1992. But by many other measures, ITT remains a laggard. Its revenues dropped 1% last year, to $22.8 billion. Meanwhile, its return on assets has dropped to a paltry 1.3%, from 2% three years ago. Return on total capital has fallen as well, from 7.8% in 1990 to 6.9% in 1993. And the operating margins for four of ITT's seven divisions remain far below prerecession levels. Since 1990, ITT has cut research-and-development spending by 19%, to $460 million in 1993, and slashed capital spending by 32%, to $506 million.

SKEWED FOCUS? Why the discrepancy between stock performance and corporate performance? Ideally, a rising share price should reflect improvements in operations, rewarding executives and shareholders alike. Not so at ITT. Analysts say the company's fortunes have been regarded as so lackluster for so long that just the promise of better things to come is having an outsize effect on its stock price. Moreover, these analysts and former top executives suggest Araskog has focused largely on boosting ITT's stock, pursuing a strategy aimed at arousing investor interest more than engineering a real turnaround in operating results.

Over the past three years, ITT has restated those results for a number of units, recasting sluggish performance in a more positive light. Although such recalculations are legal and the company has disclosed each restatement, ITT's balance sheet "sometimes looks like the auditors' full-employment act of 1994,"

WHAT'S POWERING ITT'S STOCK





ARASKOG: WALL STREET IS GAMBLING ON RUMORS THAT HE'LL SPLIT UP ITT

acknowledges CFO Robert A. Bowman. Heavy stock buybacks have also helped make the company's performance look glossier. Since 1989, ITT has bought more than 28 million shares, causing earnings per share to swell 23% on the basis of the repurchases alone.

What's more, Araskog is selling many of the treasures in the ITT empire. Over the past 15 years, he has shed 250 units. In 1992, ITT cast off its remaining presence in telecommunications, once the conglomerate's core, when it sold its 37% stake in Alcatel NV for $3.6 billion. Then, in December, ITT announced it would spin off ITT Rayonier Inc., its forest-products subsidiary, to shareholders. It is also planning to sell 19.9% of its small educational unit in a public offering this summer. "They're not improving performance—they're cashing in some of their assets," notes Boston Consulting Group Inc. Vice-President Eric Olsen, who examined ITT's financial performance back to 1974 at BUSINESS WEEK's request. "They're not building value but giving more value to the equity holders by liquidating."

The sell-off has fueled speculation on Wall Street that Araskog, 62, and three years away from mandatory retirement, may end up breaking ITT into three separate companies: ITT Sheraton Corp.; a manufacturing company including ITT's auto-parts and defense units; and a financial-services and insurance business built around ITT Hartford Group Inc. Such speculation, which even Araskog acknowledges is "not outlandish," has Wall Street salivating. PaineWebber Inc. analyst Jack Modzelewski puts ITT's breakup value at $115 a share—nearly 36% above the current price.

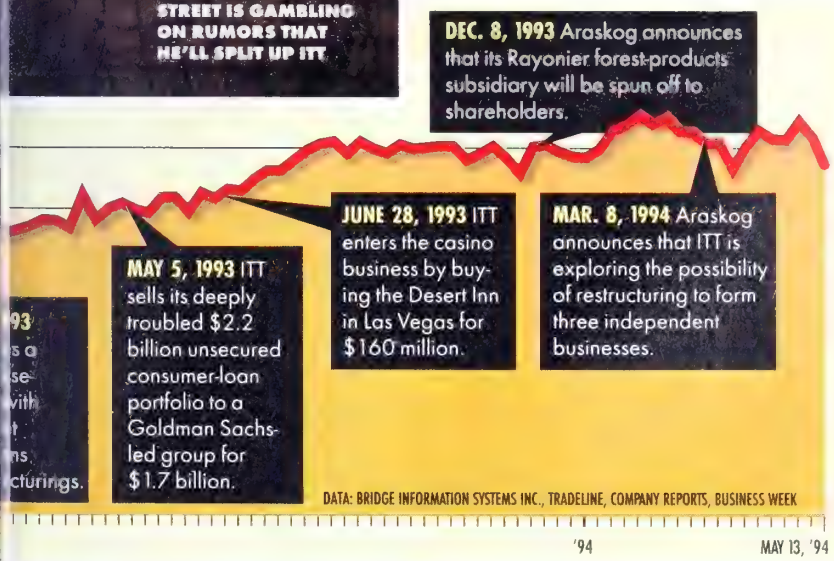
It's not just shareholders who are benefiting from the runup in ITT's stock price. Araskog and his top executives also have a powerful incentive in this regard—a new pay plan adopted in late 1993 that awards them rich stock-option packages as soon as they get the stock price above 104. ITT's chief stands to make at least $3.3 million on his options alone if the stock hits the target price. According to four former top executives, Araskog often talked at strategy meetings about how prospective deals would affect ITT's share price and executives' compensation. Indeed, the Rayonier spin-off alone carried an immediate payoff for Araskog, who was granted an extra 14,000 options and saw his entire 164,000 stock options package reset at a much lower threshold. He "spent a great deal of time focused on the price of the stock and how that related to bonuses and stock options," one recalls.

As an example, these former executives cite Araskog's efforts to have the entire $942 million gain on the sale of ITT's Alcatel stake in 1992 included in his compensation calculations that year, even though ITT suffered a net loss of $885 million and wasn't to receive full payment for the deal until June, 1994. In the end, the directors decided that the loss for the year meant no executive should receive a bonus for 1992, says Robert A. Burnett, head of the board's compensation committee. Burnett also says he doesn't recall Araskog pressing too hard for the bonus.

TWISTING THE DIALS. Araskog denies that any of his decisions have been motivated by concerns for his own pay. "I don't think I have ever made an issue of executive compensation," he says. "Most people aren't motivated by money. Most are motivated by doing things well, being with a good organization, being proud." Moreover, he disputes suggestions that his strategy has been primarily aimed at driving up ITT's stock price rather than improving operations. "I think the stock price is up because of the performance of the company," he says. And although the operating results at many of ITT's units are below 1990 levels, Araskog says: "The company is really on an upturn, and we expect it to continue."

Wall Street's warm embrace marks a striking change in the perception of ITT and Araskog, who has spent his 15 years as CEO twisting the dials of the empire built by Harold S. Geneen. Many of ITT's problems stemmed from its size and diversity. When Araskog took over in 1979, ITT did everything from bake Hostess Twinkies to rent Avis cars. And for most of Araskog's reign, ITT's stock has underperformed the market. From 1979 to the end of '91, it lagged behind Standard & Poor's 500-stock index by 36%.

Talk of slimming ITT down isn't new. Raiders Jay Pritzker and Irwin L. Jacobs suggested breaking up the conglomer-



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ate when each took a run at it back in the mid-1980s. But Araskog repeatedly opposed a breakup. In '89, when he wrote *The ITT Wars*, an account of how he managed to save "my company" in the mid-1980s, Araskog belittled the concept of running a company primarily for the benefit of shareholders and the stock price. "So-called shareholder value," Araskog wrote, was served by a combination of "buyouts, restructuring, and other stratagems [that include] special events and asset sales."

Before long, though, it became clear that Araskog had to change his stance. Despite ITT's poor performance, he had become one of the most richly compensated CEOs in Corporate America. In 1990, when ITT's share price fell 20% and income from operations fell 30%, his paycheck doubled, to $11.4 million. Included in the package were 120,000 restricted shares, worth about $6 million. The board granted the extra shares to Araskog a year ahead of schedule so he could avoid a higher New Jersey state income-tax rate expected in '91. Araskog initially denied he ever received the shares: "It just isn't so." But an ITT spokesperson later confirmed that the stock was indeed given to him and said that Araskog simply forgot about it.

SINGLE-MINDED. The following year, CalPERS launched its offensive, insisting that ITT directors pay attention to the share price. The board drafted a new plan to link executive pay to performance. In an August, 1991, meeting in Sacramento, Araskog made peace with CalPERS after outlining the new plan. The meeting went so well that Araskog recalls it as "a love-in by the time we left." To hear Araskog talk nowadays, he focuses single-mindedly on enhancing shareholder value. "There's a general recognition that there is a long-term incentive program in place that [guarantees] the performance of the company [by linking it to] the stock price," Araskog says. To his critics, however, some of the moves to enhance shareholder value have amounted to little more than paper-shuffling.

In 1993, for example, ITT stopped including less impressive results from Sheraton's 230 franchised properties in its annual report, while it added in the revenues, occupancy rates, and average room rates of its 149 more desirable leased and managed hotels, which were never included before. The result: Sheraton now reports 1993 revenues of $3.2 billion rather than the $784 million that would have been reported under the previous accounting methods. Other key measures also look much better. Instead of a 1993 occupancy rate of 66% and an average room rate of $90, Sheraton now reports an occupancy rate of 69% and an average room rate of $105. ITT restated results for Sheraton going back to 1991 to reflect its new accounting methods. If ITT prepares to spin Sheraton off, as many analysts expect, the beefed-up financials would make Sheraton look more appealing to investors. (One exception: Operating margins declined because the restated revenues were much higher while operating profits remained unchanged.)

ITT'S LONG-TERM PERFORMANCE IS LACKLUSTER...

Millions of dollars	1990	1993
SALES	$21,680	$22,762
NET INCOME	923	913
RETURN ON TOTAL CAPITAL	7.8%	6.9%
RETURN ON ASSETS	2.0%	1.3%
RETURN ON EQUITY	11.6%	12.3%

...AND MANY OPERATING MARGINS ARE LOWER

Unit	1990	1993
AUTOMOTIVE	7.1%	4.6%
DEFENSE AND ELECTRONICS	3.6	3.1
FLUID TECHNOLOGY	9.6	9.2
SHERATON	4.7	2.4
INFORMATION SERVICES	13.5*	20.3
INSURANCE	3.2*	7.0
FINANCIAL SERVICES	2.1*	18.8

*These numbers would have been higher, but were not restated to reflect discontinued operations and write-downs of 1992.

DATA: COMPANY REPORTS, LEHMAN BROTHERS INC.

Similarly, after selling off troubled consumer loans, the company last year restated 1992 results for ITT Financial Corp., replacing the $781 million loss with a $175 million profit. Does ITT rely too heavily on restatements to gloss over past troubles? "I think that's a fair criticism," says CFO Bowman. "Maybe from a materiality point of view, we don't need to do it" so often.

Not all of this activity has been cosmetic. ITT paid $375 million last year for 80% of a General Motors Corp. parts business that complements its existing ITT Automotive division. And on May 12, ITT announced it would spend $750 million to build the Desert Kingdom, a luxury casino in Las Vegas, to strengthen its push into casino gambling. But the gaming strategy hasn't gone as smoothly as Araskog would have liked: ITT's stock dropped more than 7% in the days preceding and following the widely expected announcement.

"NEVER A CLASH." That wasn't the only setback for ITT's gaming ambitions. Sheraton President John V. Giovenco was asked to resign last July after serving only five months, says ITT Director Michel David-Weill, senior partner at Lazard Frères & Co. Araskog, who hired the former top Hilton Hotels Corp. casino executive to lead the gaming push, denies rumors of a clash with Giovenco. "It's never a clash when one [person] is not equal to the other," he says. Giovenco couldn't be reached for comment.

Despite the flurry of activity, the conglomerate's performance remains uninspiring. True, ITT's net income was up 25% in the first quarter, and Lehman Brothers analyst Phua K. Young expects 1994 net income to climb 7%, to $978 million, while revenues rise 10%, to $24.3 billion. Since taking huge write-offs on troubled assets in 1992, ITT Hartford and ITT Financial have done much better. But many of ITT's businesses aren't doing as well as they were a few years ago, when the company was derided as a poor performer. ITT Automotive's sales were nearly flat last year. And its operating margins were far below the levels of 1990 (table). Sheraton also isn't operating at nearly the 15% margin of the late '80s. Experts say the luxury-hotel market is still suffering from overcapacity.

Still, Araskog's job remains a plum by most corporate standards. Despite ITT's greater emphasis on cost-cutting in recent years, his sumptuously appointed offices take up an entire half floor of the company's midtown Manhattan headquarters. ITT's boss currently receives an annual salary of $[illegible] million and a yearly bonus that should equal that amount. Last year, he also received options worth more than $22 million if ITT's stock appreciates by an average of 10% a year by 2003, when the options expire. Even after his retirement in October, 1996, Araskog is guaranteed a $400,000 annual consulting contract through 2001 and a nomination to ITT's board each year until 2003.

Not bad, considering that the 10-member board is itself richly compensated. Only 18 other public companies pay their directors cash retainers greater than ITT's annual $42,000, according to

ectorship Databank, a publisher that ks director compensation. And once itional fees are included, six of the e outside directors received more n $100,000 last year. "They work der than any corporate board in erica," says ITT spokesman James lagher. "They have to study. ITT is of the more difficult companies in erica to understand."

ew shareholders begrudge Araskog directors their pay. "As long as skog's pay is tied to performance the board is closely monitoring it, re not bothered," says CalPERS' pes. And ITT's stock continues to ite Wall Street. "It's almost as if [Araskog has] read all the books on how to create interest in the stock, and he's implementing them. That's the ITT story," says PaineWebber's Modzelewski.

GRAND EXIT. Given Araskog's impending retirement, it's a story that analysts expect to end with a big, stock-boosting bang. Based on tantalizing hints that Araskog has made—most recently in a letter accompanying the 1993 annual report—some analysts expect him to break up ITT by the time he is forced to retire in 1996. That would allow Araskog to exit a winner, with a peaking stock price and a valuable cache of stock options. "I don't think there is a successor to Araskog," says Modzelewski. "It's like the disintegration of the Soviet Union."

So far, Araskog is being cagey about a possible breakup. Splitting up ITT wouldn't "be a healthy objective in itself; it even sounds kind of self-serving," he says. Still, given the market's appetite for a breakup, it may be an irresistible prospect. "It's the world we live in," he says. He adds that all of ITT's core businesses are strong enough to be on their own. Now that he's accustomed to running the company for maximum immediate stock price, splitting it up may be the only logical conclusion to Araskog's long and tempestuous reign.

By Elizabeth Lesly in New York

THE CFO WHO'S WOWING WALL STREET

When Robert A. Bowman took over as chief financial officer at ITT Corp. in 1992 the tender age of 37, some Wall reet analysts groaned. ITT had little ddition of financial acumen and was own for chilly inaccessibility to instors. Bowman's first meeting with alysts didn't inspire much confidence. e wasn't comfortable. He didn't seem know what to say," recalls Donaldn, Lufkin & Jenrette Securities rp.'s Jack Blackstock. "I thought 'Uh , he's too green.'"

Two years later, the once jittery ro has emerged as a major reason at ITT is now a Wall Street darling. wman has developed new financing hicles, installed tightened financial ntrols, and worked assiduously to urt Wall Street analysts. Indeed, ile other ITT executives partied it up a lavish reception at the Desert Inn May 12 after announcing that Sheron would take a $750 million gamble ilding a brand-new casino, Bowman t with analysts, painstakingly filling the details. "Substance is what lls," he says.

ELL YOUR HOUSE." True, ITT's stock s dropped 5% since the beginning May as investors worried that it as placing too big a bet on the comtitive gaming business. But Bowan's assurances have won over most alysts. "I'm a very big fan and supter of Bowman," Blackstock says w. How big a supporter? "I'm telling u to go sell your house and put the oceeds in ITT stock."

Bowman is one of a new breed of nderkind CFOs who have taken a ore activist role in burnishing their mpanies' images. His cohorts include chard D. Nanula of Disney, G. chard Wagoner of GM and Richard Tysoe of Federated Department Stores. They're making names for themselves with skilled handling of analysts, investors, and the press—and with aggressive dealmaking. For example, Kemper Corp. looked so good after 37-year-old CFO John H. Fitzpatrick helped implement a massive restructuring that General Electric Co. decided to bid for the money-management company.

BOWMAN: YOUNG, NOT GREEN

Like many of his contemporaries, Bowman seems to challenge the common perception of CFOs as conservative, behind-the-scenes bean-counters. A Harvard University graduate with an MBA from the Wharton School, Bowman litters his huge office with Coca-Cola cans, swings a baseball bat during meetings, and proudly points out that he shares a birthday with his fellow Midwesterner, David Letterman.

He also has an eclectic resumé, with stints as a Treasury Dept. aide and a Goldman, Sachs & Co. investment banker. He is best known, however, for his eight-year run as Michigan's treasurer, where he got the state's bonds upgraded four times and ran the state pension fund more aggressively. During his tenure, assets rose nearly 150%, to $18 billion—much of that because of shrewd investments. "Smart people are a dime a dozen," but Bowman can be counted on to deliver results, says former boss and Michigan Governor James J. Blanchard, now U. S. Ambassador to Canada.

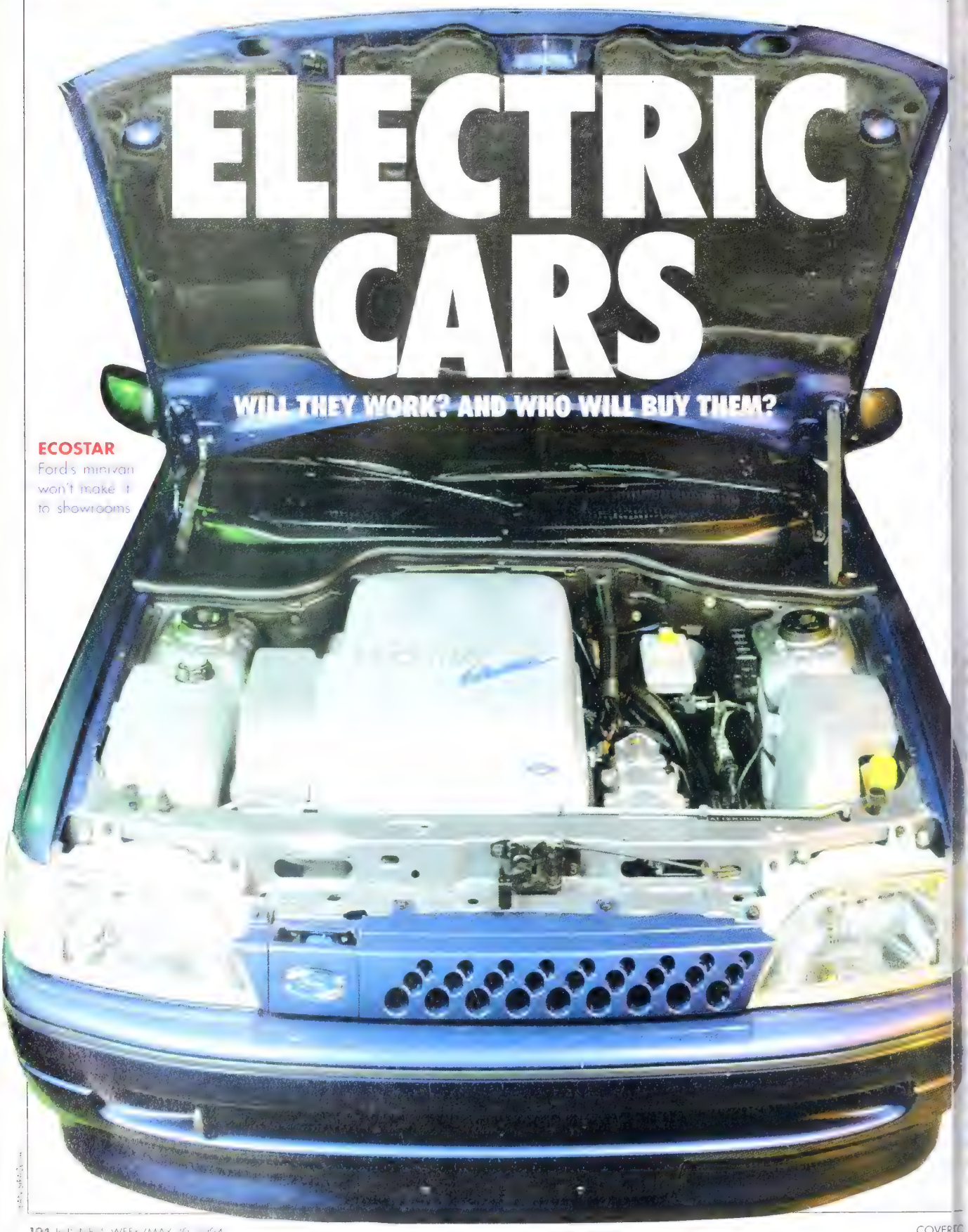
Some of what Bowman has accomplished at ITT is easy to spot. To please analysts and investors, he sped up quarterly announcements from 10 weeks after the quarter's close to just 18 days. Unlike his predecessor, longtime ITT CFO M. Cabell Woodward Jr., Bowman meets with analysts on the day results are announced to discuss the details. More subtle are the moves he has made to dress up ITT's balance sheet. One example: To help improve capital efficiency and move closer to return-on-equity goals, Bowman bundled and sold as securities $1.4 billion of ITT Financial Corp.'s receivables last year. While other companies have done this, it had been unheard of at staid ITT.

Bowman is upbeat about the company's future. "The tumblers of the lock are really falling into place," he says. And Bowman's success has earned him an influential voice at ITT. While he and two other ITT operating chiefs rank just below CEO Rand V. Araskog in the pecking order, Bowman is the only executive to share an entire floor of ITT's midtown Manhattan headquarters with Araskog. So let other young execs toil in middle management, working their way up slowly. For Bowman and the new breed of CFOs, the future is now.

By Elizabeth Lesly in New York, with bureau reports

ELECTRIC CARS

WILL THEY WORK? AND WHO WILL BUY THEM?



ECOSTAR
Ford's minivan won't make it to showrooms

The batteries powering my red Ford Ecostar electric minivan were running low. Clenching the wheel of the experimental vehicle, I roamed the back eets of Santa Barbara, seeking a bus pot where I could plug in my indus-al-strength charger. When I found it, dash read 1 mile to empty. Whew!

From my start at Venice Beach in oggy Los Angeles, I had come 97 les that Saturday in March. My des-ation, Sacramento, was still 400 miles ead. Even die-hard electric-vehicle (EV) porters rarely attempt such treks in s mainly meant so far for commuting l local delivery. So why was I acting e the electric vehicle's answer to ileas Fogg? Because I wanted to find the truth about those four-wheeled potatoes that environmentalists love l Detroit hates. Do EVs work? What the trade-offs? And will anyone buy m?

Detroit's Big Three and the rest of world automotive industry—along h dozens of other companies from rida to Denmark—are in a furious h to answer such questions. That's ause crunch time is now. On May 13, lifornia regulators reaffirmed that by 8, some 2% of the vehicles sold there high-volume carmakers must be ctrics. Four years for auto companies the blink of an eye: It takes at least ee just to engineer, test, and tool up a typical new model—much less any-ng exotic.

So carmakers are locking in their 1998 igns this year. The technology in my rowed van was much like what will ch showrooms in October, 1997. And just in California. New York and ssachusetts will require EVs the fol-ing year, and 10 other Eastern states s the District of Columbia may sign too. As I hummed along between ctrical transfusions, I met en-preneurs who are betting millions t future generations of electrics could day rule the roads. I saw the con-erable obstacles that EVs must over-ne. But I also saw how they could n a toehold. The bottom line, I de-ed, is . . . well, read on.

E BELIEVERS. For now, the charge to-rd electrics faces a daunting prob-: Batteries can't equal the power or ge supplied by gasoline. Still, seri-work on EV batteries is only in its ancy, and improvements are coming, eit slowly. And there's plenty of gress on other fronts: Engineers e built efficient, high-speed AC mo-s, mounted energy-saving, high-pres-e tires, pared car weight with high-h composites, and invented devices t cut charging time 90% while tripling tery life.

If the race to build EVs does somehow pay off, it will mark the most sweeping change in the $500 billion global auto industry since 1902, the year a gasoline-powered vehicle captured the land speed title from—believe it or not—an electric. The quest for clean cars is spurring work on other power sources. Among them: fuel cells, which consume hydrogen without combustion, flywheels, which store energy in the rotation of disks that spin 100,000 times a minute, and capacitors, charge-storing devices bulked up through Star Wars research.

While such work goes on, EVs have attracted important believers. The Defense Dept. is spending $66 million this year to research battlefield vehicles that would emit no telltale noise or heat. Entrepreneurs are pouring sweat and cash into startups for EVs or—in the case of Compaq Computer Chairman Benjamin M. Rosen—hybrid vehicles that use fossil fuels as well as batteries.

Down deep, these entrepreneurs may hope to steal a march on Detroit while it grumbles over regulation. To start, though, their strategy is to cooperate with General Motors, Ford, and Chrysler—possibly by selling components, just as Microsoft started out doing for IBM's PCs. "This is the computer industry all over again," declares Ted Morgan, president of U. S. Electricar Inc. in Sebastopol, Calif.

YELLOW HAZE. As I prepared to leave Los Angeles that Saturday, it was easy to see why California regulators yearn for EVs. A yellowish pall of pollution shrouded the San Gabriel Mountains north of town. More than half the state's 30 million people live in areas where smog regularly reaches unhealthy levels—and cars cause half of it. For 30 years, the state has squeezed tailpipe emissions—new cars spew 97% less pollutants than old ones. But those gains are wiped out as driving increases. Californians drove 260 billion miles last year, nearly triple the number two decades ago.

As critics note, California regulators can still do more to encourage mass transit, retire unclean cars, and promote vehicles that run on cleaner natural gas. But they have concluded that all this won't be enough and that zero emissions is the answer. The rules, which will be reviewed again in 1996, call for electrics' share of car sales to reach 5% by 2001 and 10% by 2003.

Once, Detroit saw a future for electric cars, too. In the 1980s, General Motors Corp. built a solar-powered vehicle called Sunraycer that dashed across Australia's Outback in record time. That emboldened GM engineers to build the Impact, a battery-powered two-seater that did zero to 60 in 8 seconds. GM execs probably rue the day in 1990 they announced plans to produce the Impact. EVs gained instant credibility—as did the zero-emission standard in the works at the California Air Resources Board. Soon, though, GM marketers concluded that the Impact wouldn't sell: It was too small, cost too much, and didn't go far enough on a charge—around 80 miles,

HOW TO JUMP-START ELECTRIC CARS

Electric vehicles (EVs) won't match gasoline vehicles in performance or price by California's 1998 deadline. But here's how carmakers hope to narrow the gap:

COST

PROBLEM: Low volumes will boost prices of early electric vehicles.
SOLUTION: *Most carmakers will start by making electric versions of high-volume gas models. The cost of electronic components should fall quickly as volumes increase. Subsidies from carmakers and utilities, plus tax breaks, will help keep sticker prices competitive.*

RANGE

PROBLEM: A 50- to 70-mile range per 7-hour charge could turn off consumers used to going up to 400 miles per tank and refueling in 5 minutes.
SOLUTION: *Improved lead-acid batteries boost range. Utilities may install quick-charge stations that recharge batteries in 15 minutes.*

BATTERY LIFE

PROBLEM: Expensive EV battery packs can burn out in as little as two years and cost thousands to replace.
SOLUTION: *New charging technique using rapid pulses may double or triple battery life. Utilities may lease batteries to consumers, spreading the cost and shouldering the risk of early failure.*

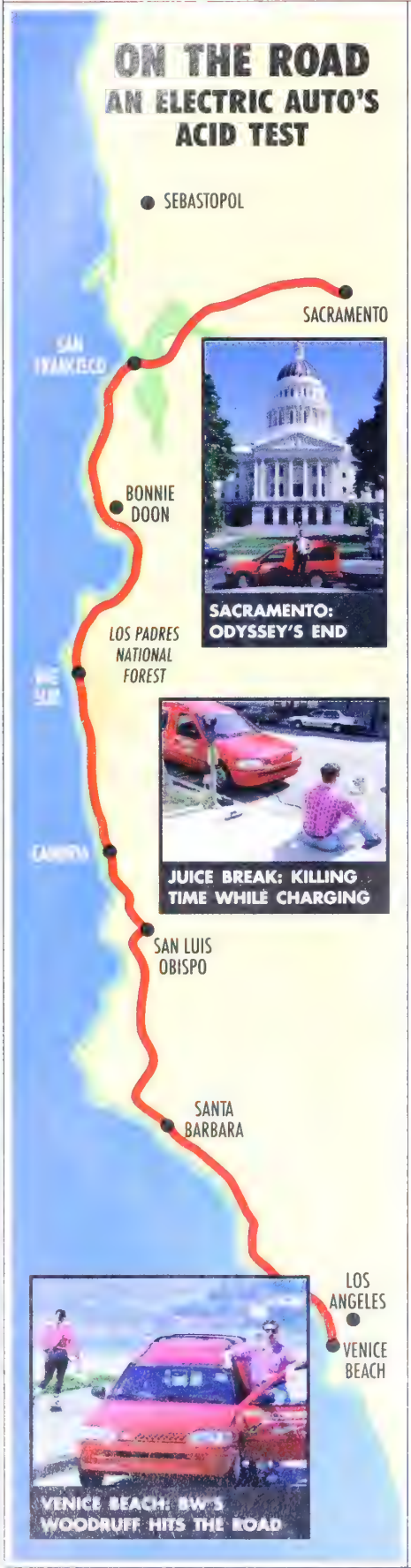
RECHARGING

PROBLEM: Many potential customers lack proper outlets for recharging.
SOLUTION: *Some utilities are seeking temporary rate hikes to subsidize installation of recharging stations.*

MARKETING

PROBLEM: Mainstream consumers will likely shy away from EVs until they have a track record.
SOLUTION: *Carmakers will initially focus on fleet buyers, such as utilities, so they can work out bugs before tackling the tougher consumer market.*

ON THE ROAD
AN ELECTRIC AUTO'S ACID TEST



SACRAMENTO: ODYSSEY'S END

JUICE BREAK: KILLING TIME WHILE CHARGING

VENICE BEACH: BW'S WOODRUFF HITS THE ROAD

vs. 300 to 400 a tank for a typical sedan.

What really alarmed the Big Three was a report by Sierra Research Inc., a consulting firm they hired. It concluded that in the first years of production, EVs could cost $21,000 more to make than gasoline vehicles. But that was for vehicles that were new from the ground up. Conversions cost only about $5,000 more, Sierra reported. And the premium falls quickly with economies of scale: Chrysler estimates that in volumes of 300,000, it could make EVs, minus batteries, as cheaply as gasoline vehicles.

To keep costs down, the Big Three will slide by at first with EV versions of existing models. GM is eyeing an electrified Geo Prizm compact. Chrysler recently abandoned work on its Destiny prototype and plans to make gasoline, electric, and natural-gas versions of its next minivan. As for Ford Motor Co., the sleek Ecostar that I drove is a no-go. Ford won't say, but look instead for an electric version of the Taurus or some other popular model.

Foreign carmakers are thinking in the same vein. Honda Motor Co. will convert Civics. Toyota Motor Corp. and Nissan Motor Co. are mum on their plans. In Europe, BMW and Mercedes-Benz have unveiled prototypes of extra-small "city cars" in gasoline and electric versions, like the Swatchmobile, due in 1997 from Mercedes and Swatch maker Nicolas Hayek. France's PSA will make 10,000 electric Peugeots and Citroens next year. Carmakers with fewer than 35,000 annual sales in California will get an advantage: They have until 2003 to sell EVs. That gives companies like Mercedes, Hyundai, and Fuji Heavy Industries, which makes Subarus, more time to refine products and gauge what consumers want.

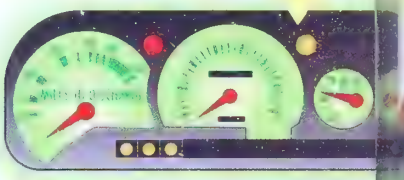
POWER ELECTRONICS
General Electric-built electronic brain changes battery's DC current to three-phase AC current and parcels it out to the drive motor. Also controls regenerative braking and runs battery heating/cooling system.

HOT AIR. I couldn't help feeling as I wheeled out of Los Angeles toward Santa Barbara on Highway 101 that EVs would go a lot farther if they could harness the hot air expended in the debate over them. Regulators say Detroit is balking needlessly, as it did with air bags, mileage standards, and catalytic converters. Carmakers say they're being forced to make lemons that they'll practically have to give away—and lose money on. Alternatively, they could buy credits earned by startup companies that sell EVs—or even swallow hard and pay a fine of $5,000 for every vehicle they fall short of their quota.

Detroit's fears notwithstanding, California officials have every reason to keep the pressure on. If EVs flop, the state might have to meet federal air-quality standards through draconian restrictions on factory emissions, which could chase manufacturers from cities, where jobs are desperately needed. "We've got a tremendous amount on the line," says California Environmental Protection Agency Secretary James M. Strock.

So does the rest of the world, which has been following California's lead.

INTERIOR GAUGES AND CONTROLS
"State of charge" gauge tells you how much juice is left. "Miles to discharge" meter tells you how far to empty.



MOTOR
General Electric-built 75-horsepower induction motor drives front wheels efficiently at all speeds, so there's no need for a transmission.

auto emissions since the 1960s. Eastern states won't benefit nearly as much because more of their electricity is generated by coal-burning plants, vs. the West's cleaner natural-gas generators. But they're pushing electrics anyway because smokestack emissions from generating stations are easier than tailpipes to cap. Abroad, EVs may be ideal in places such as Japan and France, where more power comes from clean-running nuclear plants and gasoline is costly.

As I left slumbering Santa Barbara early on Sunday, I noted that the Ecostar is eerily silent in town. On Hi

ay 101, though, at 65 mph, the thrum tires on pavement grew louder. Two sh gauges let me know I was going ectric. One read "state of charge" and owed how much juice was left in the ostar's 780 pounds of batteries. And a al marked "miles to discharge" pointed st above "90." Soon, I would need anher 220-volt outlet.

D RELIABLES. To make EVs more salle, carmakers are frantically trying to tend their range. Companies in the S., Japan, and Europe have formed parate battery-research consortia that gether are spending hundreds of milns of dollars. Although there are sevral promising solutions, it isn't clear w many, if any, will be ready by 1998.

does emerge in time, it might be from Ovonic Battery Co. in Troy, Mich. GM is helping Ovonic develop manufacturing techniques for nickel metal hydride batteries, such as those in laptop computers. Former GM Chairman Robert C. Stempel, an EV supporter, oversees the effort. In March, an Ovonic battery powered a Geo Metro nonstop at 65 mph to win a 125-mile EV race. Durability tests are just starting, and price remains a hurdle, concedes Michael A. Fetcenko, Ovonic's vice-president for technology. Still, six carmakers, from Honda to the Big Three's battery consortium, have inked development contracts, just in case Ovonic pulls off the unlikely.

Mercedes and BMW, meanwhile, are backing sodium nickel chloride. It, too, has double the energy of lead-acid, and

cle. I pulled out my charger (normally it would be on a wall at home), plugged in, and hit the start button.

Presto. Now I had five hours to kill.

Until recently, engineers despaired of reducing charge times. Cramming current into batteries generated destructive heat. But that was before pulse-charging, which can cut recharge times by 90% without excess heat. In March, a Chevy pickup with lead-acid batteries set a 24-hour distance record of 831 miles with a charger from Electronic Power Technology Inc. in Atlanta. EPTI's device alternates between charging, discharging, and rest—hundreds of times a second. Tests by the Pentagon's Advanced Research Projects Agency show it can charge big batteries in 10 or 15 minutes, "to the amazement of battery chemistry physicists," says Major

For now, most carmakers plan to ake do with tried-and-true lead-acid ttery packs—giant versions of what's der hoods today. "It's still the ongest candidate, no matter how you t it," says Seiji Tanaka, Mazda Motor rp.'s managing director for research d development. Lead-acids are reliable d, at $1,500 to $2,000 a pack, relativecheap. They'll be better by 1998: Elecsource Inc. in Austin, Tex., is starting ot production of batteries that are ch lighter because lead is coated onto ven glass fibers instead of cast.

If something better than lead-acid

in one Mercedes test went nearly 30,000 trouble-free miles. But current flows out of it slowly—a problem for hill-climbing and acceleration. Its maker, Daimler Benz subsidiary AEG Corp., is readying a version with 50% more peak power, though it's at least four years from production.

TIME-SAVER. As I rolled into the Santa Maria River valley, I knew I'd need juice soon. I pulled into the Mullayhee Ford dealership south of San Luis Obispo and asked Sales Manager Dino Grossi for a charge. He led me to a tin building where I found a weathered 220 recepta-

Richard Cope, manager of ARPA's electric-vehicle program.

In this case, good things come in twos: Besides allowing for rapid "refills," pulse-charging could triple the life of batteries. That would mean, for instance, that lead-acid batteries could last 45,000 miles or more, lowering overall operating costs closer to that of gasoline at $1 a gallon.

Batteries aside, the electronics in EVs will get better—and cheaper—at exponential rates. For instance, an AC drive motor that now costs $4,000 might be $500 in production runs of 5,000 to 10,000, says Daniel D. Rivers, manager of light-duty electric vehicles for Hughes

R.J. DOYLE BW

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Electronics Corp. Same goes for the heavy-duty bipolar transistors that turn direct battery current into alternating current to drive the motor. They cost up to $325 apiece, and a car needs six. But as engineers refine them, the price should drop below $100, says Rivers.

Sunday afternoon, I whirred as far as Cambria, a hamlet near the William Randolph Hearst castle at San Simeon. There I found Ben Boer, an EV enthusiast. He has a 220-volt outlet in his driveway, hidden under a fake water spigot, where I charged for the night. Boer dreams of launching the Cambria Electric Car Co. to convert gas-burners to electric.

Boer belongs to a growing contingent of EV entrepreneurs. Companies such as U. S. Electricar and Solectria Corp. in Arlington, Mass., are tapping into the rising demand for EVs from electric utilities. They're a diverse bunch, ranging from buttoned-down venture capitalists to tinkerers with permadirt under their nails. Their companies primarily convert new gasoline models, such as GM's S-10 pickup, to electric.

For the next few years, the little guys could actually help Detroit. That's be-

WHERE'S THE JUICE?

In the 1970s, James McBreen thought battery-powered cars were around the corner. He was at General Motors Corp., searching for a powerful, cheap, safe, and long-lived battery. He's still searching. "I think the problems will be solved, eventually," says McBreen, now at Brookhaven National Laboratory. "But when you take into account everything—including economics—we really don't have that much yet."

So why hasn't the nation that tamed the atom been able to build a good electric-car battery? Mainly because the underlying science is fiendishly tricky. Batteries harness chemical reactions that produce electrons. In a standard lead-acid battery, for instance, drawing out electrical current transforms lead into lead sulfate. During recharging, electrons react with the lead sulfate to re-form lead. Today, researchers are pinning their hopes on more exotic reactions: In nickel-metal-hydride batteries, such as those being developed by Ovonic Battery Co. in Troy, Mich., hydrogen reacts with oxygen to form water and electricity.

CLIMBING THE VINE. Trouble is, performance worsens as the metals and chemicals deteriorate. And there's no ideal battery chemistry. One that releases electrons fast—great for acceleration—usually isn't good at storing lots of energy for long range. Beyond that, the energy in batteries is limited to roughly 5% of that in the same weight of gasoline, says Robert Hamlen, director of the power sources division at the Army Research Laboratory in Fort Monmouth, N. J. Even the best batteries would be seriously depleted climbing one infamous hill—dubbed the Grapevine—on Interstate 5 leading out of Los Angeles.

Within these limitations, progress is being made. Recent tests show that such batteries as the zinc-air system from Electric Fuel in Israel, Ovonic's nickel metal hydride, Asea Brown Boveri's sodium-sulfur, AEG's sodium nickel chloride, and Hydro-Quebec's lithium polymer can offer triple the performance of lead-acid batteries. And many experts are excited by the idea of coupling batteries with flywheels or capacitors, which can deliver surges of power—just the ticket for jackrabbit starts. "With the right combination, a lot of us are beginning to feel a car is doable," says Energy Dept. battery expert Edward Dowgiallo.

Doable, perhaps, but practical? "None of the batteries running in cars today have a plan to make them affordable," says John Williams, chairman of the U. S. Advanced Battery Consortium (USABC), which is funded by the Big Three carmakers and the federal government. The difficulty is scaling up individual cells to big batteries—and making them on production lines—explains why so many "breakthroughs" have fizzled.

NO TEARS. That, and the fact that the U. S. has skimped on research until lately. "We haven't made the investment, so we shouldn't be crying about the results," says Elton J. Cairns, director of the Energy & Environment Div. at the Energy Dept.'s Lawrence Berkley Laboratory. Even now, with USABC spending $260 million over four years, adds one government scientist, "we're just playing around. If we really wanted an electric-car business, we need to spend a billion dollars per year."

Europe and Japan have worked harder. Japanese companies have developed lithium and nickel-metal-hydride batteries for camcorders, computers, and other consumer products, and they're trying to scale them up for electric cars. "Japan no doubt has a big lead on us," says Brian Barnett, director of battery industrial studies at Arthur D. Little Inc. Science may produce an adequate car battery. But it may not be American. It won't be cheap. And it sure won't match the performance of a V-8.

By John Carey in Washington, with David Woodruff in Detroit and Peter Coy in New York

A GOOD BATTERY IS HARD TO FIND

An electric-car battery needs plenty of energy for long range and power for climbing hills and accelerating. It also must be cheap, long-lived, and safe. So far, no battery has it all:

BATTERY	ENERGY (WATT-HOURS PER KILOGRAM)	POWER (WATTS PER KILOGRAM)	COST (DOLLARS PER KILOWATT-HOUR)
LEAD-ACID	33-50	65-300	$70-$200
Cheap but limited energy; heavy; lead is toxic.			
NICKEL METAL HYDRIDE	55-70	150-200	$230-$1,000
Good performance, but costly materials and manufacturing.			
LITHIUM POLYMER	150	100	$50-$500
Manufacturing may be costly. Lingering safety fears.			
SODIUM SULFUR	80-140	90-175	$200-$1,200
Costly; possibly dangerous materials; high temperature.			
ZINC-AIR	185-200	60-225	$100
Excellent performance, but need to replace part of battery to refuel.			
ZINC BROMINE	75-80	35-60	$150-$300
Requires pumps and hazardous bromine; performance is good.			

DATA: BUSINESS WEEK

ıse the California rules will allow big ·makers to meet the EV standard by ying EV credits earned by the small .nufacturers. And whatever else they ıtribute, upstart companies are spawn- : some of the industry's most innova- e ideas. Bob Beaumont, who started naissance Cars in Palm Bay, Fla., in 91, has taken a minimalist approach keep costs down. His $11,000 Tropica, open-air, two-seat convertible, uses d-acid batteries from electric fork- s. "The market is eagerly awaiting a ically priced car," he says.

On the other end of the technology ·ctrum is Alan Cocconi, a California ·titute of Technology graduate and nder of AC Propulsion Inc. in San Di- s, Calif., which designs high-perfor- nce AC drivetrains. They produce blis- ing, sports-car-like performance. ·coni's own car is a battery-powered nda CRX that has a generator-toting iler for long trips. Last year, he drove : Honda to Yosemite National Park vacation.

Unburdened by traditional notions of at cars are for, some companies en- ion tiny EVs for a new niche. Such ighborhood cars" as the El-Jet from nmark's Kewet might replace second s used to fetch groceries or drive to · train station. Pacific Gas & Electric may create semipublic fleets of small ; that could be rented at Bay Area pid Transit train stations. To make ·rocars safe, Switzerland's Horlacher lds its 9-foot-long Consequento pro- ype of extremely rigid composite ma- ials. Thanks in part to protection of air bag, the crash-dummy occupants a forerunner prototype were nearly ·cathed last year in a head-on, 30- h test crash with an Audi sedan.

ARDING THE EGG. I left Boer's house nday at 8 a.m., winding along the ·ged Pacific Coast Highway. At about 30, I plugged in at epair shop in Big ·. I killed time h a four-hour hike Los Padres Na- ıal Forest, then ıded for the home Mike Brown and ·ri Prange in Bon- Doon, north of ıta Cruz. Brown converted Volks- gen Rabbits to for nearly 20 years. We hooked up Ecostar's charger. After dinner, they ·pped me at a bed-and-breakfast.

Next morning, I got the bad news: e charger had popped a circuit-break- Mike hooked up the car's emergency -volt charger when he got up at 6, the car was only half-charged. I had p.m. appointment at U. S. Electricar, 60 miles north of San Francisco. So I drove gingerly, pretending I held an egg between my foot and the "gas" pedal. I got to downtown San Francisco with two miles to empty, dashed to a Hertz Corp. office, rented a gas-burner, and steered into the teeth of rush hour.

Relishing a sudden sense of power and freedom, I realized how hard it will be for carmakers to attract EV buyers. Indeed, EV opponent David E. Cole, director of the Office for the Study of Automotive Transportation at the University of Michigan, argues that carmakers will have to price them way below cost. Then, he says, they'll have to raise prices on gasoline vehicles to make up the loss. Not a very efficient way to clean the air, Cole argues. "When people become aware of the hoax that's been perpetrated, they will become unglued," he predicts. "At some point, there will be hell to pay." Meanwhile, EV supporters worry that carmakers could turn consumers off if they cut corners with underpowered conversion vehicles. Moans Cocconi, the head of AC Propulsion: "It'll sour the whole electric-vehicle effort."

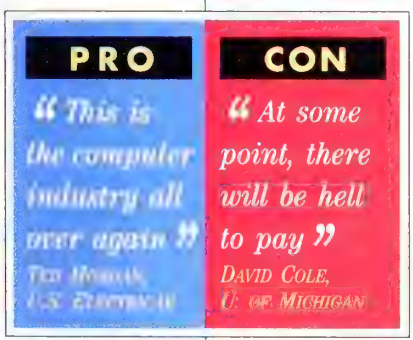
If EVs can weather their early struggles, however, they might quickly get a second wind. Flywheel batteries, for instance, store energy kinetically rather than chemically. The wheels are made of special composites so they don't fly to pieces. One company, Satcon Technology Corp. in Cambridge, Mass., is developing a flywheel for a Chrysler car that may compete in the 24-hour race at Le Mans in 1995. Meanwhile, supercapacitors that could store big doses of electricity, then release the juice for quick acceleration or hill-climbing, are being pursued by several companies.

FLASHING WRENCH. Fuel cells may not meet California's "zero" standard because they emit trace air pollutants. But they're far cleaner than gas-powered engines because they derive electricity directly from hydrogen and oxygen, without combustion. The main byproducts are carbon dioxide and drinkable water. Mercedes-Benz has driven an experimental fuel-cell vehicle thousands of miles. And GM scientists are working on a federal project to build a prototype fuel-cell vehicle by 1997 that runs on methanol. Still, fuel cells are costly, what with their platinum catalysts and devices to extract hydrogen from fossil fuels. GM and Mercedes believe fuel-cell cars are at least 10 years down the road.

Some investors—Ben Rosen among them—are betting on hybrids, which run mainly on batteries but have small engines for extra power and range. Rosen and his brother Harold have quietly formed Rosen Motors Corp. in Los Angeles. People familiar with their plans say they're designing a car that would generate electricity with a clean, efficient turbine running at a constant speed. Yet hybrids don't meet the "zero" standard and are bound to cost more, since they have two power sources.

The Ecostar had run almost flawlessly. But on I-80 to Sacramento Wednesday—the fifth and final day of my trip—I had an unsettling experience. As I bombed along at 70 mph with blues gui-

INNOVATOR: U.S. Electricar's Morgan is angling to get engineless vehicles from GM



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Wonderware Corp. created a Microsoft Windows®-based control system at one-fourth the cost of a typical configuration.

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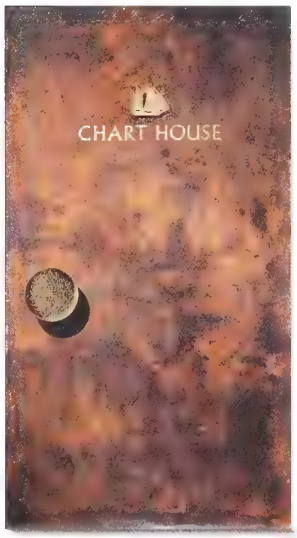
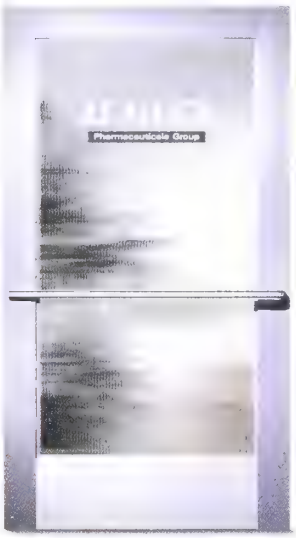


Microsoft Office and WinResources Computing, Inc. made changing menus fast and easier for this popular restaurant chain.



MDL Information Systems, Inc. and Microsoft Office provided productivity tools allowing research scientists to better analyze data.

This securities firm looked to Micro Modeling Associates and Microsoft Office to expedite the delivery of investment research to clients.

MTX International, Inc. and Stanford Business Systems joined this supermarket's accounting and point of sale system with Microsoft Access.

Platinum Software and Paradigm Technologies implemented a Windows NT®-based client/server architecture, cutting costs 65%.

This law firm now spends less time on paperwork thanks to Quickstart Technologies' use of Microsoft Office and the Windows NT family.

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tarist Robert Cray on the stereo, the minivan started to lurch and buck. An orange wrench flashed on the dash. I pulled off. Could I have fried a $290,000 machine? For two minutes, I mulled escape to Mexico. Then I tried the key again. A cooling fan whirred to life and a green dash light appeared. (Ford says I must have overheated the battery or the electronic controller.) I eased onto the highway, and soon the state capitol dome appeared ahead.

From my electric odyssey, I suspect EVs will make it somehow. If a breakthrough occurs in batteries, they'll have a good shot at success. If not, they'll probably still find a niche, though only with more generous tax breaks and other subsidies, as well as privileges such as special highway lanes and parking spaces. The drive to build a worthy electric vehicle is every bit as challengin the Apollo moon shots—and more u on earth. I'm convinced that electric aren't just a figment of an environ talist's imagination. After all, I d one 500 miles.

By David Woodruff in Sacramento, Larry Armstrong in Los Angeles, Carey in Washington, and bureau rep

THE NOT-SO-BIG WHEELS LEADING THE CHARGE

Electric vehicles cost more than gasoline ones, yet their performance lags. So how has Ted Morgan raised $16 million for U. S. Electricar Inc. since he became president of the Sebastopol (Calif.) company in 1992? And why is Benjamin M. Rosen—one of the richest of venture capitalists—starting Rosen Motors Corp. to make hybrid electric vehicles?

In both cases, the answer is the same: Electric-vehicle companies are picking their targets carefully. Rather than challenging Detroit's Big Three, à la Preston Tucker with his Tucker Torpedo, today's EV believers are cooperating with Detroit—or picking opportunities the big guys ignore.

Morgan hopes to cash in on a feature of California's 1998 mandate that permits carmakers to trade EV credits. He wants to get engineless vehicles —"gliders"—from General Motors Corp. in exchange for giving GM the EV credits he earns with each sale. A former office-supply retailer, Morgan isn't aiming at consumers: "That's the market the Big Three will go after." He hopes to sell converted vehicles to utilities. Later, he would like to build vehicles for fleets such as the U. S. Postal Service.

SYMBIOSIS. EV veteran Bob Beaumont is already calculating how much the Big Three might pay for EV credits he earns: perhaps 40% of the $5,000 fine per vehicle they must pay for falling below quota. His Renaissance Cars Inc. in Palm Bay, Fla., will sell low-tech cars with decent performance. The $11,000 Tropica two-seater that goes on sale this summer does 65 mph and has a 65-mile range. But it isn't clear how many consumers will want a bare-bones car with no top—and no climate control.

James D. Worden, too, hopes for a symbiotic relationship with big carmakers. Now 27, he founded Solectria Corp. in 1989 with a Massachusetts Institute of Technology classmate, Anita V. Rajan. Besides converting gas vehicles to electric, he is working on a new car called Sunrise that he hopes will push the limits of EV efficiency. He thin Solectria's innovations will attract tention from Detroit. "There's a g chance we can become a supplier developer of parts for them," he sa

DANCES WITH GIANTS. Rosen isn't s ing exactly how Rosen Motors—run his brother, satellite designer Har A. Rosen—will find customers. S he has said he believes that carmake devotion to the internal combusti engine blinds them to the possibili of EVs—leaving an opening for sm companies to create a new industry

Investors may see battery develo ers as safer bets. In February, Israe Electric Fuel Ltd., which makes a zi air battery, raised $ million in a U. S. pu lic offering. Or ta Electronic Power Tec nology Inc., an Atlan company developi an ultrafast batte charger. "We ha been approached many firms on W Street," says Preside Karen Robinson. date, EPTI has shoo them away—and raised $5 million private stock offering

Ultimately, EPTI a the other startu can't help encounte ing the automotive b hemoths—for better for worse. "Wh you're dancing with g ants," says Da Brandmeyer, a U. Electricar vice-pres dent, "you do anythi wrong and they crush your toes."

By David Woodru in Detroit, with Ga DeGeorge in Mia and Gregory Sandl in Boston

SOME ELECTRIC-CAR STARTUPS

COMPANY/ LOCATION	FOUNDED	1993 REVENUE IN MILLIONS	1993 EARNINGS IN MILLIONS	EMPLOYEES
AC PROPULSION INC. San Dimas, Calif.	1991	$0.7	NA	6
President Alan Cocconi helped design GM's Impact. He makes electric drive trains and modifies gas vehicles. For long trips, he puts a generator on a trailer.				
RENAISSANCE CARS INC. Palm Bay, Fla.	1989	0	–$0.54	26
Builds the two-seater Tropica. This is President Bob Beaumont's second whirl at electrics. He sold 2,253 38-mph Citicars from 1974 to 1976 before folding.				
ROSEN MOTORS CORP. Los Angeles, Calif.	1993	NA	NA	NA
Funded by Ben Rosen, chairman of Compaq Computer Corp. Plans to make a lightweight hybrid EV with a gas-turbine engine.				
SOLECTRIA CORP. Arlington, Mass.	1986	$2.0	NA	25
Converts Geo Metros and Chevy S10 pickups; working on Sunrise, a ground-up EV. In March, President James D. Worden won a 125-mile EV race.				
U.S. ELECTRICAR INC. Sebastopol, Calif.	1976	$0.9	–$2.6	220
Converts Geo Prizms and Chevy S10 pickups; builds electric industrial vehicles. President Ted Morgan has raised $16 million since joining in 1992.				
UNIQUE MOBILITY INC. Golden, Colo.	1967	$2.3	–$2.5	45
Headed by Ray A. Geddes, it develops gear for EVs; has contracts with BMW, Ford, and others.				

DATA: COMPANY REPORTS, BUSINESS WEEK

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nd services. Our strength is no longer simply the
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SECURITY FIRMS

A SLIDE FROM GRACE FOR MAX CHAPMAN?

Nomura renewed his contract but thwarted his broader ambitions

For months, Max C. Chapman Jr. had been angling for a promotion from Nomura Securities Co. The chief executive of Nomura Securities International Inc., the Japanese brokerage giant's U. S. subsidiary, lobbied relentlessly to run the London office while keeping his New York job. "At some point, Nomura will say to me, 'We would like you to do something more,' or else I'll decide to do something else," Chapman told BUSINESS WEEK last December.

For a while, it seemed as though Chapman had prevailed. On May 10, *The Wall Street Journal* reported he would get the promotion. But then, on May 18, Chapman announced he would not accept Nomura's "flattering offer to become co-chairman of both the American and European operations of the firm." The time-consuming London job would be hard on him and his family, he said.

Why the abrupt about-face? Chapman declined BUSINESS WEEK's request for comment. But sources close to Nomura say problems kept the two sides from cutting the deal. Chapman wouldn't have been senior to the current London chief, Koichi Kane, which may have been unacceptable to Chapman.

Behind this development, say sources close to the firm, is the fact that Chapman's Japanese bosses have cooled on him. Nomura's difficulties with Chapman, say these sources, range from his acerbic manner and demands for higher compensation to his loose management style. Chapman's bosses, says a source outside the firm, feel "the way he runs the place reflects the Kidder culture." Kidder, Peabody & Co. has come under fire because of huge losses stemming from allegedly bogus trading by one of the stars of its bond business. Chapman spent most of his career at Kidder before joining Nomura. Headquarters executives have even assigned a New York staffer to fax news stories on the scandal at Kidder to Tokyo, says one source.

Further, the New York Stock Exchange is investigating a book- and recordkeeping violation, and Nomura has retained Gary Lynch of Davis Polk & Wardwell to handle the matter, confirms Davis Polk. Junichi Ujiie, co-chairman of NSI, says "Nomura Tokyo senior management is proud of [Chapman]'s management" and that he has "significantly enhanced our compliance program."

ON HOLD. Nomura was scheduled to announce on May 19 that Chapman agreed to a three-year extension of his current contract, which was to have expired in September. Still, it's clear his broader ambitions have been put on hold.

No one questions Chapman's achievement in transforming NSI from an arcane to a major Wall Street player. But despite the contract renewal, there's little love lost between Chapman and his bosses these days. In the past, he has acknowledged friction with them. Abrasive and known for being brutally direct, Chapman made several enemies in Tokyo—though he retained the support of Hideo Sakamaki, Nomura's CEO. Compensation has been another difficult issue. The Japanese felt Chapman's compensation demands for the London job were too high. In addition to a large pay package, perhaps as high as $50 million over three years, he asked Nomura to pay for a London house and for transatlantic travel in his private jet, sources say. Ujiie says the compensation offer was "fair" and that the $50 million figure is "totally inaccurate."

A tough April also hurt Chapman. NSI lost money when client Askin Capital Management collapsed and is now a key creditor along with Kidder. Nomura is also seeking to recover $7.5 million allegedly lost in the bankruptcy of HYM Financial Inc., a Clifton (N. J.) firm, says Newark's *Star-Ledger*.

But most of the Japanese criticism stems from Chapman's actions as a manager. While CEO of Nomura, he owned a company called Moran Group that ma

HAS CHAPMAN BROUGHT A KIDDER-LIKE CULTURE TO NSI?

NOMURA AND CHAPMAN: POINTS OF CONTENTION

- Chapman's abrasive management style played poorly with Nomura brass in Tokyo
- Chapman asked for more compensation, perks, and latitude to conduct outside business ventures than Nomura was comfortable with
- Nomura was concerned about the excessively broad authority Chapman was giving to his lieutenants, which the firm felt might expose it to the kind of trading debacle that battered Kidder, Peabody & Co.
- Despite a strong 1993, Nomura's U.S. operations lost money during April's volatile markets

DATA: BUSINESS WEEK

d money for Wolfgang Flöttl, a secre- financier at the center of an Aus- n banking controversy. Moran has ces in the same building as Nomura has traded with Nomura (BW—Dec. 1993). Ujiie says Nomura approved apman's outside business activities. Further, Chapman's top lieutenant, hael A. Berman, who runs the firm's important fixed-income department, s in Vail, Colo., with his family and y spends half of his time in New York, according to informed sources.

Berman insists: "I spend a lot more than half my business time [in New York]." He says he spends weekends in Vail and only at times works out of his home. "I have phones and computer screens set up there. I view it as a full-time job," he adds. Ujiie says Berman has been sharing authority over the department with Lawrence J. Pomerantz.

While some experts say that, for someone in Berman's position, being physically present isn't always necessary, others disagree. "It's difficult to understand how you can fulfill your duty of reasonable supervision from a distance," says John C. Coffee, a Columbia University law professor.

The issue of Chapman's supervision of NSI seemed to have been settled by the contract extension. But whether he and his bosses can settle their differences remains to be seen.

By Leah Nathans Spiro in New York

KING

HE JAPANESE BANK HAT KNOWS HOW TO HUSTLE

nwa could be a model for its more genteel—but troubled—rivals

Addressing some 400 Sanwa Bank Ltd. branch managers at their annual Tokyo get-together recent- President Hiroshi Watanabe waxed timental about director Steven Spiel- g's finally winning multiple Oscars for *indler's List* after years of trying. u've got to have a dream," he said. Watanabe certainly has a dream—and s seeing it come true. With Japanese nks weathering their rst lending crisis since rld War II, Watanabe ushing Sanwa—whose 0 billion in assets ke it the world's rth-biggest bank—to ome much more prof- ble. He's doing it ough cost-cutting, glo- expansion, and reso- ion of problem cred- . The strategy is ring off. In the fiscal r ended Mar. 31, San- became Japan's third st profitable corpora- n, behind Toyota Mo- Corp. and Nippon legraph & Telephone rp. Its $780 million in earnings ex- ded those of its two closest competi- s, Sumitomo Bank Ltd. and Bank of kyo Ltd., by $100 million apiece.

EDA UNLOADED SANWA'S BAD U.S. REAL ESTATE AND LBO LOANS

RO INTEREST. It's a surprise that San- should be setting the pace. Based in Tokyo but in scrappy industrial aka, Sanwa has never looked like oth- Japanese "city banks," the local term money-center lenders. Unlike the ll-groomed executives of the aristo- tic Industrial Bank of Japan Ltd., nwa bankers look like the middle-man- ement "salarymen" they serve, right wn to their rumpled blue suits. The downscale attitude extends to the executive suite, where oil paintings by local Impressionists take the place of the Monets favored by other bankers.

Sanwa bankers function with a no-frills, in-the-trenches approach aimed for the most part at midsize Japanese borrowers. This effort enabled Sanwa to increase its loans 5% last year and raise its share of the commercial-lending market from 10% to 12%. Sanwa bankers now make more loans per employee—$22 million—than any other bank in Japan.

To be sure, Sanwa has plenty of troubled customers and is nursing some of them along. For instance, it has cut its interest rate to zero on $2.5 billion in credits to Nippon Housing Loan Co., a big finance group. The interest holiday will last 10 years. But overall, only $8.8 billion, or 2.7%, of Sanwa's loans are now classified as bad, vs. 4% for Sakura Bank Ltd., with $515 billion in assets, and 3.5% for city banks on average.

Sanwa also is making a splash overseas. Managing the effort is Minoru Eda, who vows that "Sanwa never shrinks in any field." Eda earned his stripes in the U. S., repairing the damage from the slew of bad real estate and leveraged-buyout loans Sanwa had made in the 1980s. Since buying a small primary government-securities dealer in 1988 and renaming it Sanwa Securities (USA) Co., Eda has signed on enough U.S. clients lately to boost Sanwa's share of the U. S. Treasury bond market to 3%. Sanwa also ranks among the top ten dealers in Eurodollar futures on the Chicago Mercantile Exchange and has amassed some $85 billion in derivative transactions since its New York-based swaps unit started trading in 1992. "We don't perceive Nomura or Mitsubishi Bank to be our competition," says one Sanwa banker. "Our competition is Merrill Lynch, Dean Witter, and Goldman Sachs."

TROUNCED. Eda is moving forthrightly into China and Southeast Asia, too. Masanori Akiba, Sanwa's head of Asian project finance, can barely hide his glee as he describes how his team snatched a $145 million Indonesian deal away from Bank of America last year. How? Akiba heard that P.T. Tirtamas Majutama, a Jakarta-based petrochemical maker, had picked BofA to lead a syndicate to make loans for a $200 million polypropylene plant. Akiba lined up guarantees for the plant's output from a corporate relative—Nissho Iwai Corp., a trading group 4.9% owned by Sanwa. That made the financing less risky than BofA's plan and won Sanwa the deal.

Such aggressive salesmanship is going a long way to lead Sanwa back to health. Other Japanese lenders may discover they can't afford to ignore Sanwa's take-no-prisoners approach.

By Larry Holyoke in Tokyo, with William Glasgall in New York

GEORGE MITCHELL

MUNICIPAL BONDS

'NINETY-FIVE PERCENT OF OUR PROFITS ARE LOCKED IN'

At muni bond insurer MBIA, earnings seem to be on autopilot

It's a CEO's dream, an almost perfect money machine. The business of MBIA Inc., the nation's largest insurer of municipal bonds, doesn't seem very glamorous. But it has been producing an almost relentless flow of profits. Consider: The muni market, the last, best tax haven for the individual investor, is booming, despite brief slumps, such as the first quarter of 1994, when issuance fell 26%. The market should remain healthy indefinitely as America rebuilds its aging infrastructure. Bond volume has climbed more than 30% in each of the past three years. The percentage of insured bonds also keeps rising inexorably, as investors forgo the small reduction in yield, about a quarter of a point, for added security.

MBIA'S ELLIOTT: TAPPING NEW MARKETS OVERSEAS

Earnings growth also seems inexorable, owing in part to the unique accounting of bond insurers, who collect their premiums from issuers up front but realize premium income over the average life of the bond, typically 12 years. Indeed, MBIA's "storehouse" of future earnings stood at $1.5 billion at yearend. Then there's MBIA's $3 billion investment portfolio, most of it in AA-rated or better government paper with an average yield of nearly 9% last year. According to David H. Elliott, MBIA's chairman and chief executive, "95% of our earnings are locked in, assuming no material losses." That seems a safe assumption. Incredibly, MBIA has suffered only a single loss in its 20-year history.

As a result of all this, MBIA's revenues have grown 92% since 1990, to $429 million, while earnings have risen from $127 million to $259 million. Although muni-bond issuance is expected to slump by a third in 1994 as a result of a decline in municipal refinancings, Donaldson, Lufkin & Jenrette Securities Corp. analyst Joan Solotar predicts MBIA's earnings will increase 5%.

With profits on autopilot, Elliott might be forgiven if he spent his days watching the geese feed on the well-tended grounds of MBIA's Armonk (N.Y.) headquarters. But instead, he has been pursuing an aggressive and quite innovative diversification that plays upon MBIA's strengths in underwriting, investment research, and money management. The company now manages cash for local governments. Assets under management have grown from $507 million to $2 billion since 1992. MBIA also is becoming a leader in providing guarantees to financial institutions on asset-backed deals.

MBIA's most adventurous forays are overseas, where it is offering muni insurance, a market that has been virtually untapped, and handling complex financial deals. In early May, MBIA guaranteed $1.5 billion of debt issued in the recapitalization of troubled French bank Comptoir des Entrepreneurs. It was Europe's largest asset-backed deal.

France is an especially attractive, if unproven, market for MBIA. Historically, local governments borrowed directly from government authorities. With little credit history, the cities would not be able to receive investment-grade debt ratings without the guarantee that MBIA insurance offers. All told, predicts Elliott, these diversifications could reach 0% of MBIA's total revenues within the next few years.

Behind MBIA's hustle, not surprisingly, is some stiff competition in its core business from the Financial Guaranty Insurance Corp., a unit of General Electric Capital Services Co., and from AMBAC Inc. Worse, muni insurance is rapidly becoming a commodity product. Five years ago, an average underwriting might have been priced at 50 basis points—that is, one-half of one percent of the total bond value. Now, prices on the most competitive deals range around 20 basis points.

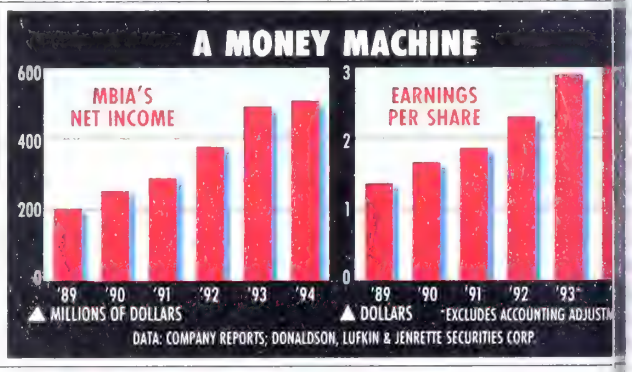
MBIA's newer businesses, in contrast, have higher returns on equity, in part because they are less capital intensive than insurance. The company is charging the state of New Hampshire 40 basis points to manage $165 million in funds for local governments.

OVEREXPOSED? Competitors are able to point to only a few flaws in MBIA's strategy. Despite its nearly unblemished credit record, rivals claim MBIA is overly aggressive in underwriting bonds used to finance hospitals—which might come under fiscal pressure if health-care reform passes. But Elliott defends the exposure by saying the company uses strict underwriting guidelines and is widely diversified in its hospital portfolio.

If there is anything for Elliott to worry about, it might be the recent poor performance of MBIA stock. Trading recently in the 55 range, the stock is down a third from its 52-week high of 81. Analysts believe the stock is suffering from fear of financial-services stocks in a rising-interest-rate environment.

But few financial-services companies can expect the double-digit earnings increases that industry analysts expect from MBIA over the next few years. Eventually, Wall Street will have to accord the MBIA money machine great respect.

By Tim Smart in Armonk, N.Y., with Charlie Hoots in Paris



ONFESSIONS OF MONEY LAUNDERER

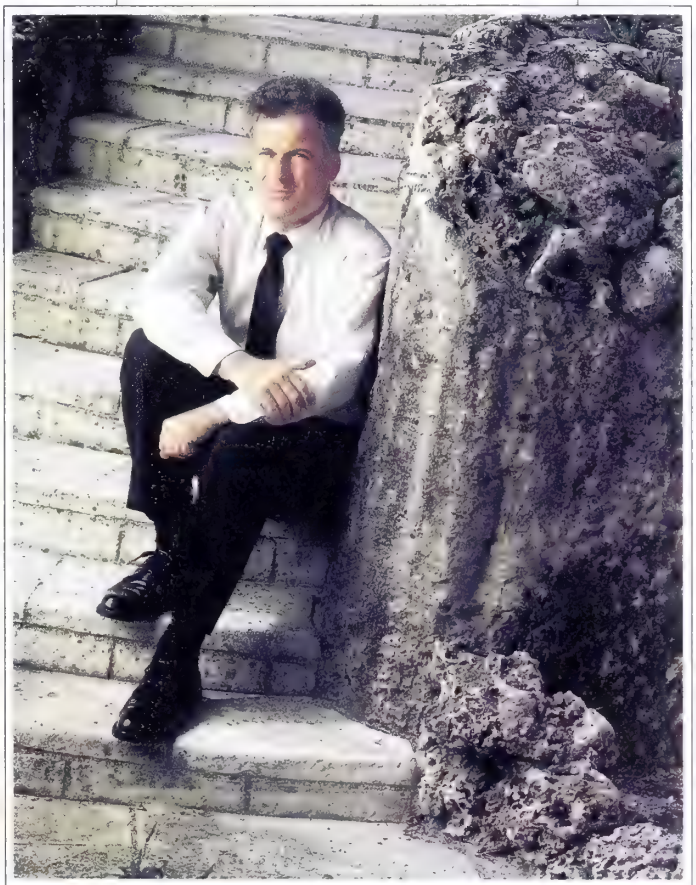
expert tells the feds how easy it is to clean up with dirty cash

Kenneth W. Rijock used to chuckle when he watched *Miami Vice*. The drug lords and gangsters in lnight shoot-outs didn't match the style of the former Miami attorney ned money launderer. Like many a oe-trotting businessman, Rijock trav-d weekly to the Caribbean, with nthly jaunts to London, Paris, and er European capitals. "There were h stereotypes and gang-s, and they weren't at all histicated," he says of the characters. His work "was uch more intellectual form hat program."

'rom 1983 to 1987, Rijock, 47, helped launder tens nillions of dollars and hide ets for a massive marijua- and cocaine-smuggling g. A federal probe of the ration, known to investi-ors as the "Tico Rodri-z" case, after one of two thers at its center, led to victions of more than 100 viduals, law enforcement rces say. Rijock himself, er agreeing to cooperate n prosecutors, served two rs in federal prison for his in the ring. But his story nds as a warning to bank-who believe—erroneously, says—that current regula-ns to eradicate money ndering are working.

RD OF MOUTH. For Rijock, life of a launderer began ocuously enough. "No one s they intend to go into ney laundering," he says. u just get drawn into it." er serving in Vietnam and duating from University of Miami's school, he settled in Miami, joined a or local firm, and practiced banking for four years, eventually setting his own practice in 1981.

Rijock's criminal life began when one is clients started importing marijua- and needed information about off-e banking. Rijock went to a lawyer new who recommended the island of uilla. Rijock now says the Caribbean its banks constitute "a black hole noney laundering." In February, 1983, according to federal indictments of the launderers, Rijock got his client and a crony to buy three certificates of deposit worth $915,000 from Caribbean Commercial Bank (Anguilla) Ltd. The bank sold them the CDs even though the buyers purchased them in the names of Interzone Holdings Ltd., whose signators were Minnie Mouse and Goofy. Later that year, Rijock flew from Fort Lauderdale to Anguilla with his marijuana-importing client, four cronies, and about $7 million in cash. There, they deposited cash in accounts set up in the names of shell corporations.



EX-ATTORNEY RIJOCK IS NOW A PARALEGAL AND GRATIS LECTURER

Rijock's clients used a variety of methods to launder cash. Often, they used the CD gambit. Rijock's clients also used a scheme involving "commissions" that is still in use today despite anti-laundering laws passed in the interim. Rijock would introduce clients to accountants and others who would funnel the dirty money to cash-starved businesses, usually wholesalers. The companies would then pay Rijock's clients "sales" commissions, keeping a cut of the drug money as their share.

Once he became known for his laundering skills, Rijock was recommended to others in the loose network of drug smugglers and dealers. He formed Florida corporations, helped set up offshore companies with assistance from island attorneys, and couriered cash. By 1986, after some of his clients were busted, Rijock knew the feds were on to him. In 1987, after he got married, he says he went straight, returning to real estate law. But the law caught up with him in 1990. Rijock was indicted and pleaded guilty. The stress of that period destroyed his marriage, and his jail sentence meant a painful separation from his 2-year-old son.

STARTING OVER. Rijock was released from prison in 1992. Although he resigned from the bar and was forbidden from reapplying for five years, he's working as a paralegal in a Miami law firm while he lectures gratis at such forums as a recent money laundering conference, sponsored by the newsletter *Money Laundering Alert*, that was attended by bankers and law-enforcement officers. "He has been very helpful in getting insights into how the other side thinks," says Richard R. Buczek, special agent at the Federal Aviation Administration.

Rijock has a strong message for bankers and law-enforcement types. "We need to do something really radical," he says. "We could stop money laundering in this hemisphere." Rijock would expand personal-disclosure requirements for bankers and force U. S. banks to end correspondent relationships with offshore banks that are known to be dirty.

Already, Rijock may be having some small role in tightening money laundering laws. While in prison, he testified before a Swiss magistrate investigating Swiss bankers and lawyers who had accepted drug money. Partly because of that, a money laundering case is pending against a Swiss money manager. Meanwhile, Switzerland has adopted slightly tougher anti-laundering rules. That's a start, says Rijock, but there's still a long way to go.

By Gail DeGeorge in Miami, with John Templeman in Bonn

BY GENE G. MARCIAL

'CHRYSLER WILL GET PISTOL-HOT AGAIN'

When the Federal Reserve Board began to hike interest rates on Feb. 4, one of the groups big investors quickly dumped was autos, including high-flying Chrysler, whose stock peaked at 63 in early January. It has since fallen as low as 43 and closed at 45½ on May 17. The Street remains skittish, but some pros think the plunge has made Chrysler a great bargain for another ride up.

"Chrysler will get pistol-hot again," says a New York money manager shepherding $3 billion. He has been buying more stock, even though his investment firm already owns 1 million shares. He's betting Chrysler will come out with upbeat news about sales and earnings growth when its top brass, led by President Robert Lutz, meet with analysts and big investors on May 20. The annual shareholders meeting was scheduled for May 19.

The money manager is banking on Chrysler to announce two bullish moves soon: a 2-for-1 stock split and a higher dividend. "The company is going gangbusters. It can't build vehicles fast enough—cars, minivans, trucks, and Jeeps," argues this pro. He thinks the stock will hit 75 this year.

Analyst Ron Glantz of Dean Witter Reynolds agrees. "Chrysler is my top choice," he says, because more than likely it will "surpass by a wide margin the sales and earnings expectations for this year—and the next two."

THIRD SHIFT. Glantz's estimates are probably the highest on the Street: He sees Chrysler earning $9.20 a share this year, vs. the consensus estimate of $8.05. The company made $5.59 last year. Next year, Glantz expects Chrysler to earn $11, whereas the consensus looks for $9.50. In 1996, Glantz sees $14; the Street just $11.

Is Glantz too bullish? Not at all, says the analyst, who explains that Chrysler has been increasing its market share practically across the board even as inventories run low. Chrysler, he notes, plans to boost capacity in the second half, adding a third shift at one Detroit plant to up output of its popular Jeep Grand Cherokee by 45,000 units.

Despite the Fed's move in tightening, rates are still reasonably low, and consumer confidence in U. S. cars is high, says Glantz. So he sees sales continuing to grow strongly.

One portfolio manager at a hedge fund, who has also been scooping up Chrysler shares in recent weeks, argues that the market has discounted prematurely the peak of the auto cycle. "We have two more years to go in the cycle, judging by the pent-up demand that's still out there," he says. "That's what we think, too," says a Chrysler executive who says analysts' consensus estimates are achievable.

REVVING UP TO HIT 75?

DATA: BLOOMBERG FINANCIAL MARKETS

A GOOD PROGNOSIS AT SUN HEALTHCARE

Sun Healthcare Group is engaged in a David-and-Goliath merger with the much-larger Mediplex Group. But the deal hasn't attracted much attention. That's just dandy for some investors, who see the buyout making Sun a major player in the nursing-home, advanced-care, and pharmaceutical-service businesses. The stock is down to 19—following a runup to 25 in March and April after the deal was announced.

"Sun is now worth at least 30, considering how big it will become," says investment manager Jim Awad, who has been accumulating Sun. He says Mediplex, a provider of short-term care through its network of inpatient and outpatient facilities in 11 states, will boost Sun's top and bottom lines: Mediplex posted revenues of nearly $400 million and earned $16 million in 1993, while Sun had sales of $191 million and made $10.4 million.

The combination will operate a total of 113 health-care facilities in 20 states with more than 13,000 beds. "As investors focus more on the company's operating potential, it will become clear that the stock, at 19, is substantially undervalued," says Awad. The buyout is worth $312 million in cash and stock. For each Mediplex share, stockholders get $11 in cash and 1.28 shares of Sun. That comes to about $37 for each Mediplex share—now trading at 35.

A Florida securities analyst says Sun "appears to be substantially undervalued, compared with other stocks in the long-term-care industry." He figures the combined company will earn $1.40 a share next year, up from an estimated $1.10 this year.

SEIZE THE MOMENT AT TORCHMARK?

To investment manager Ed Walczak, who has been bearish on the market for about a year, stocks are still a risky proposition. But he has found one he calls a Warren Buffett stock—in other words, it has consistent earnings growth, strong balance sheet, and low price. The stock: Torchmark, an insurance and financial services company growing at a 15% yearly clip.

Torchmark was trading as high as 49 on the Big Board in early February but skidded to 37 in April, partly because of lawsuits over one of its insurance policies. But based on "the company's consistently strong earnings record and business fundamentals, the decline in the stock price offers a great buying opportunity," says Walczak.

He thinks the stock is worth at least 50. Others say more: An analyst at Neuberger & Berman, which owns a large block of Torchmark shares, values it at 56, and Ronald McIntosh at New York securities firm Fox-Pitt, Kelton thinks it's worth 60.

What is Torchmark's expertise, and where does it get its profits? The company, notes Walczak, derives 30% of earnings from life insurance, 27% from personal financial-planning services, 20% from health insurance, 13% from its Wadell & Reed money-management unit, and the remaining 10% from other small units. Torchmark has the lowest operating costs of any medical insurer of its size in the country, notes Walczak. Analysts figure the company will earn $4.30 a share this year and $4.80 next year vs. last year's $4.04.

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POLICY

IRONING THE WRINKLES OUT OF PRIVATIZATION

As cities hit snags, they're figuring out what works and what doesn't

Only days after Cleveland Mayor Michael R. White floated the prospect of allowing private companies to bid for street-surfacing work, nearly 200 noisy union members packed a mid-May City Council meeting to vent their anger. Earlier in the month, Chicago Mayor Richard M. Daley, an early proponent of privatization, declared himself "mad as hell" upon discovering that the private company building a new 911 emergency center had submitted $6.3 million in questionable bills.

What's happening to privatization, a Big Idea of the 1990s for streamlining government and cutting costs? It's not dead, to be sure: The fiscal pressures behind the privatization movement remain unrelenting. And the move to contract out public services is spreading across scores of cities and states.

Yet public officials are running into formidable roadblocks—from unions, from middle managers, and from private contractors that don't deliver. Only now are mayors learning what works and what doesn't. Officials have found out it's best to start small and, above all, to make sure there's lots of private-sector competition. What's more, it's critical to let public-sector departments bid on contracts. In many instances, public workers are proving that they can do a better job of delivering services than outsiders can.

"THE RELIGION." Even the word "privatization" is dropping from the public-policy lexicon. Officials in such cities as Chicago, Indianapolis, and Milwaukee, weary of the term's implications of both anti-unionism and poor management, now refer to their "competition policy." Says Milwaukee Mayor John O. Norquist: "Privatization is not a religion. Competition is the religion."

The change is more than cosmetic. Mayors have discovered, for example, that turning a city monopoly over to a private one can give privatization a bad name. Indianapolis Mayor Stephen Goldsmith uses a "Yellow Pages test": Only if he can find five or more private services listed in the phone book for a given field is he inclined to open city programs to bidding. Goldsmith has turned over some 40 programs—from wastewater treatment to golf-course maintenance—to private companies, and he is now eyeing the city's international airport. And in Philadelphia, museum guards are under private management.

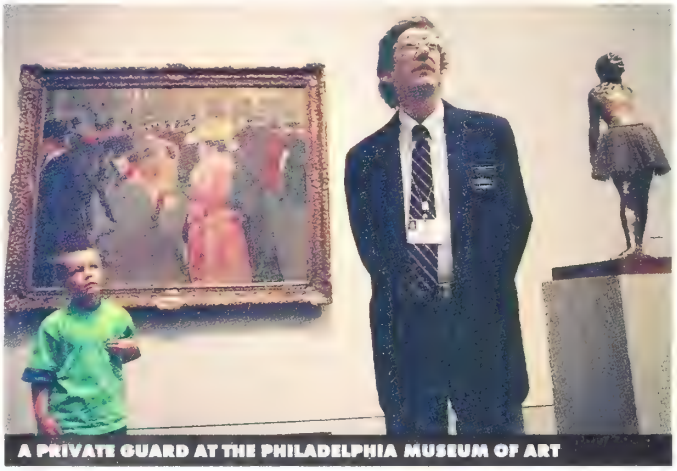
It's crucial for privatization backers to get the formula right, because the critics are loaded for bear. Unions and city council members are gearing up in Los Angeles and New York to block privatization. Already, Los Angeles Mayor Richard J. Riordan has backed away from plans to turn over garbage pickup and parking-ticket collection to outside contractors. The array of resistance facing New York Mayor Rudolph W. Giuliani could at least initially force him to focus on low-profile privatizations and delay any dramatic initiatives, says E.S. Savas, an urban-affairs specialist at Baruch College.

WORK RULES. More and more mayors, however, are winning over the dissidents by including them in the process. They are letting public employees bid on projects along with the private sector. Public workers are winning a growing number of the contracts—allowing cities to make good on their good-government drive without contracting out.

No doubt the threat of losing work is a powerful incentive for unions. "The kinds of things appearing on the table—work rules, wage rates, part-timers," notes Linda Morris, Philadelphia's director of competitive contracting. In fact, the city is reconsidering whether to contract out management of its sludge plant, now that unions and managers have crafted a plan to shave one-third off the $24 million operating cost. Meanwhile, workers in Indianapolis and Phoenix have already won back a number of refuse contracts.

Indeed, the old privatization dogma doesn't seem to play anymore. Mayors now realize that replacing political patronage with what one Chicago union official calls "pinstripe patronage" of private contractors is both simplistic and ineffective. It's "competition policy" that's playing now in Peoria.

By Richard A. Melcher in Chicago with Pam Black in New York



A PRIVATE GUARD AT THE PHILADELPHIA MUSEUM OF ART

HOW TO FARM OUT SERVICES

Tactics mayors are using to bypass the opposition:

ENCOURAGE COMPETITION Allow public-sector workers to bid for contracts against private ones—and give them contracts if they are the low bidders.

EASE THE BLOW Provide employee buyouts or job training for public-sector workers whose jobs are hit by privatization. Rather than lay off workers, shift them to other city jobs and encourage private contractors to hire them.

START SMALL Privatize parking-ticket collections and other small operations before moving on to services with lots of jobs at stake, such as garbage collection.

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THE FEW, THE TRUE, THE BLUE

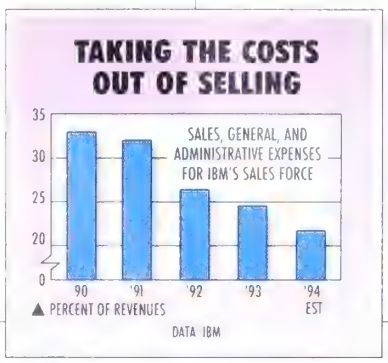
IBM is remaking its sales force into a whole new machine

You have to appreciate the symbolism. Duke Mitchell wants the world to know that the IBM sales force is serious about change. Gone is the arrogant, "have-it-our-way" attitude. Gone are layers of management. Gone are the trappings of the lush life. To prove it, Mitchell has closed five sales offices across his New York-New Jersey sales region—including space in the Madison Avenue tower that IBM recently agreed to sell—and moved 700 employees to a Cranford (N. J.) warehouse once owned by Universal Corrugated Box Machinery Co.

You can't get more humble. There are no private offices. There's just a sea of desks in the 100,000-square-foot building—400 of them spread out underneath exposed heating and air-conditioning ducts painted bright yellow. Off in one corner is Mitchell's desk—not the impressive mahogany job that graced his old private office, but a small metal model. Like all the furnishings, it has been salvaged from other IBM locations. Moving to Cranford cut Mitchell's office space by 75% and his real estate costs in half. But the most important change is the new attitude. Only 200 employees—mainly support and service personnel—have permanent desks. The rest are out calling on customers, working out of their homes and cars, and only checking in at Cranford for a day or two a month to pick up mail or prepare for customer presentations.

PRAGMATISM. Meet the New Blue sales team. A steady diet of downsizing, cost-cutting, and reengineering is remaking IBM's legendary sales force to meet the realities of today's market. The most obvious change is scale—company insiders say the worldwide head count in marketing and sales has dropped from a peak of 150,000 in 1990 to around 70,000 and will continue to fall. The goal, says Robert J. LaBant, senior vice-president in charge of North American sales and marketing, is to cut the cost of sales by a third by yearend (chart). Most of the salespeople who remain are expected not only to bring in more revenue and profit but to do it in new ways—mainly by acting as sophisticated consultants selling IBM and non-IBM technology to solve business problems.

The changes reflect both the pragmatism and ambition of CEO Louis V. Gerstner Jr.'s regime. With shrinking margins in hardware and software, IBM can't always afford to send a salesperson out to push the product. More and more of Big Blue's wares will be sold through dealers, "value-added resellers," or even mail order. Says CFO Jerome B. York: "We may just have to decide that anything with a [gross] profit margin below 20%—maybe even 25%—will have to go through [non-IBM] channels." The ambitious part is the idea that IBM salespeople can be upgraded to the status of consultants—instead of mere order-takers or product-pushers.



Reinventing the sales organization is at the heart of reinventing Big Blue. From its inception until the arrival of Gerstner, IBM has been dominated by salespeople. Part of founder Thomas J. Watson's business genius was in transforming the salesman from a shady character to a model citizen—professional, smart, polite, well-groomed, disciplined, sober, and aggressive. "Watson created an image exactly the opposite of what a salesman was in the '50s—a smile, a slap on the back, and a shoeshine," says John P. Imlay Jr., a longtime IBM competitor and chairman of Dun & Bradstreet Software. "He brought real credibility to the sales force."

That credibility was key to IBM's triumph in computers. Big Blue's clean-c

: LET THE CUSTOMER E HOW TO DEAL WITH IBM

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"I had access to all executives of all
companies that I dealt with. Part of
relationship with my business was
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working with them to solve them,"
John D. Loewenberg, senior vice-
ident for information technology ser-
s at Aetna Life Insurance & Casual-
who sold for IBM in the 1970s. "IBM

represented integrity and quality—things that became part of the IBM culture that the whole world saw IBM as."

But by the 1980s, IBM's hold on Corporate America began to slip. Armonk began pushing hardware, rather than "solutions," and shifted its target from top management to the folks who ran computer operations. After a while, though, those customers grew more knowledgeable and less likely to blindly follow the buying plans laid out by their IBM sales teams. First with minicomputers and later with personal computers, "true Blue" shops became anything but. Hardware was becoming a commodity, and customers were getting too savvy to pay a premium for the IBM logo. As competitors swarmed, IBM saw $14 billion in hardware profits disappear. Worse, the company lost its position of trust with customers. "We were simply selling iron in a world that wanted help," says George Conrades, head of U. S. sales and marketing from 1988 to 1992, and now president of Bolt Beranek & Newman Inc.

Ask GTE Corp., one of IBM's top 10 customers. In 1990, when the phone company wanted to start moving from mainframes to networks of inexpensive computers, instead of helping, IBM reps tried to talk GTE out of the downsizing. "We had to move without them," says Don Hayes, GTE's vice-president of information technology. "We used Hewlett-Packard."

On his arrival in 1993, Gerstner canvassed IBM customers and heard similar horror stories. He concluded that the company was simply out of touch with the market, partly because of arrogance and partly because of a ponderous bureaucracy. Sales were being lost because ancient procedures or turf wars between different product divisions kept IBM from satisfying the customer. "What I view as my job is trying to get everything out of the way between that customer and that distribution method or salesperson or laboratory for technology," he told Wall Street analysts in March.

PICKING CHANNELS. IBM isn't the only corporate giant grappling with how to sell more effectively and efficiently. In industries ranging from telecommunications to pharmaceuticals to publishing, sales armies once regarded as machines of boundless growth and corporate pride are looking more like wheezing gas guzzlers—too costly and cumbersome to keep up with a world of shrinking margins, fast-changing markets, and short product cycles. Robert Atkins, a partner with Mercer Management Consulting Inc., gives Gerstner high marks for grappling with the problem. He says IBM is ahead of other big companies in finding a solution. "I don't know a lot of CEOs who are paying attention to sales channels as an issue," he says.

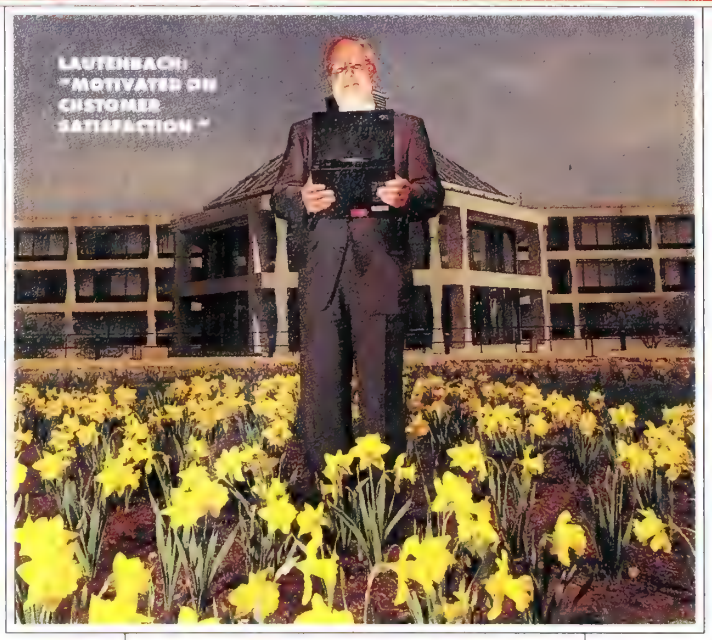
There's no easy answer. Even as it competes as a low-cost supplier of hardware such as PCs and workstations, IBM needs to satisfy customers who want to deploy all this technology in complex and sophisticated information systems. They demand low prices, but they also want a high degree of service and an intimate knowledge of their business. "The trick is to come up with a sales model that deals with both," says IDC Services Inc. analyst Frank Gens.

THE CRANFORD SPACE HAS NO PRIVATE OFFICES AND ONLY 200 PERMANENT DESKS

IBM's plan? LaBant says the basic idea is to simply let customers choose how they want to deal with IBM. For some, that means that for a price they can tap IBM business consultants, product specialists, or systems integrators to tie products—including competitors'—into corporate information systems. Or they can choose never to see an IBM salesperson. Or they can switch back and forth, depending on their needs. In Detroit, for example, 40,000 of the company's 45,000 customers in that region are covered by sales reps that work over the telephone. "I don't think of us as a sales organization," says LaBant. "We are creating and building a solutions-and-services business. And we are creating more efficient distribution business as well." Think of it as McKin-

sey & Co. meets Home Depot Inc.

To beef up the McKinseyesque side of the business, IBM has been adding hundreds of management consultants. And in early May, Gerstner announced a major overhaul of the sales organization to emphasize industry-specific expertise. By the end of the first quarter of 1995, IBM plans to have 80% of its customers reached by the direct sales force covered by one of 14 sales teams dedicated to such areas as financial services, travel, health care, utilities, and insurance. "The more you do to provide services on an industry basis, the more you learn, and you design in the customer's office," says LaBant. "And they will tell you what they are willing to pay for."



DRAMATIC CHANGES. The moves to vertical-market selling and consulting have been underway in the U. S. since 1992, and initial results have been encouraging. U. S. sales rose 9% in the fourth quarter of 1993 and 6% in this year's first quarter. GTE's Hayes says that he has noticed a change in IBM's attitude—reps now are listening better—but IBM is not likely to displace Hewlett-Packard Co. at the phone company any time soon. And WMX Technologies Inc. in Oak Brook, Ill., recently selected IBM over Andersen Consulting for a project to create an order-entry and fulfillment system. Bert Young, the company's vice-president of information systems, says that in the past he rarely considered IBM for consulting work, but he's seeing dramatic changes in the company and in his local sales rep. "They have a real business orientation. I rarely talk about products."

For the IBM sales reps who have survived, the change is invigorating. Dean Jones, who has handled the WMX account for six years, used to spend a lot of time managing the 17 IBMers assigned full-time to the account. Now there are just two reps at WMX. Yet Jones finds his work more satisfying. He's learning about the client's operations, even traveling to trade shows with WMX. "People like myself," says Jones, "have the mission to understand the customer's business."

They also have both the motivation and the latitude to do whatever is needed to help the customer. The motivation comes through changes in sales compensation. Starting this year, instead of paying straight commissions, IBM will reward salespeople on the basis of customer satisfaction as measured in customer surveys. To make sure they don't go overboard, salespeople will also be measured on how profitable their sales are. As much as 60% of a rep's commission will be tied to the profitability of a deal—regardless of whether it is products or consulting services. "In previous years, people were told what to sell," says George Samenuk, a general manager for product marketing in the Great Lakes region. "For the first time, we have a pricing tool that enables us to pick and choose different hardware and software." Equally important, Gerstner is starting to cut through some of the underbrush that has slowed IBM's responses to customer demands. Ron Hovsepian, a sales executive in the Boston area, says the steps to consolidate product groups under one senior executive have been a "godsend." In the past, if a customer had a problem that cut across two sales groups—say minicomputers and mainframes—internal bickering could delay a sale for weeks. Now, he says, the message is: "Don't worry about the individual product pieces, just focus on fixing the customer's problem."

The big challenge will be making the system work around the world. One of IBM's greatest potential strengths is its global reach. But friction between the Blue's overseas units—and between overseas and domestic units—has made it difficult for multinationals to deal with the giant as a single entity. "It's very easy to do business with IBM in a country like Portugal," says Raymond Perry, chief information officer of Avon Products Inc. in New York. "But if I wanted to do business with IBM from here and have them tell Portugal how I want to operate, it's very difficult."

GLOBAL APPROACH. Ned C. Lautenbach, senior vice-president for international sales, is taking the new IBM sales approach around the world. "Everybody is measured and motivated on customer satisfaction," he says. And everybody will be dealing with simpler rules. In the past, each country subsidiary set its own prices and wrote its own contracts. Now, one contract—and discount—covers customers wherever they buy IBM products or services. Already, barriers to cooperation among IBM's overseas units are falling, says Lucio Stanca, chairman of IBM Southern Europe, Middle East, and Africa: "The incentive program pushes you to work together."

Whether they're in Portugal or in a warehouse in New Jersey, IBM's sales troops have their marching orders. Can they bring back the glory days—when Tom Watson's well-scrubbed legions were invincible? Probably not. But they just might bring IBM out of its lengthy slump.

By Ira Sager in New York, with bureau reports

THE REMAKING OF BIG BLUE'S REPS

THE MAN IN THE WHITE SHIRT In recent years, IBM's army of well-paid generalists has sold hundreds of different products—a losing battle against specialized competitors. At the same time, IBM lost its knack for addressing customer problems.

THINNING THE RANKS Starting in 1991, IBM began drastically downsizing its sales organization. It also organized reps into product specialists and client representatives in an effort to stay closer to customers and confront competitors' specialized sales organizations. Sales were stepped up through other distribution channels, such as mail order.

THE NEW LOOK Now sales compensation is tied to profits and customer satisfaction. In May, IBM reorganized sales in 14 industry-specific teams. Product specialists now focus on fewer products.

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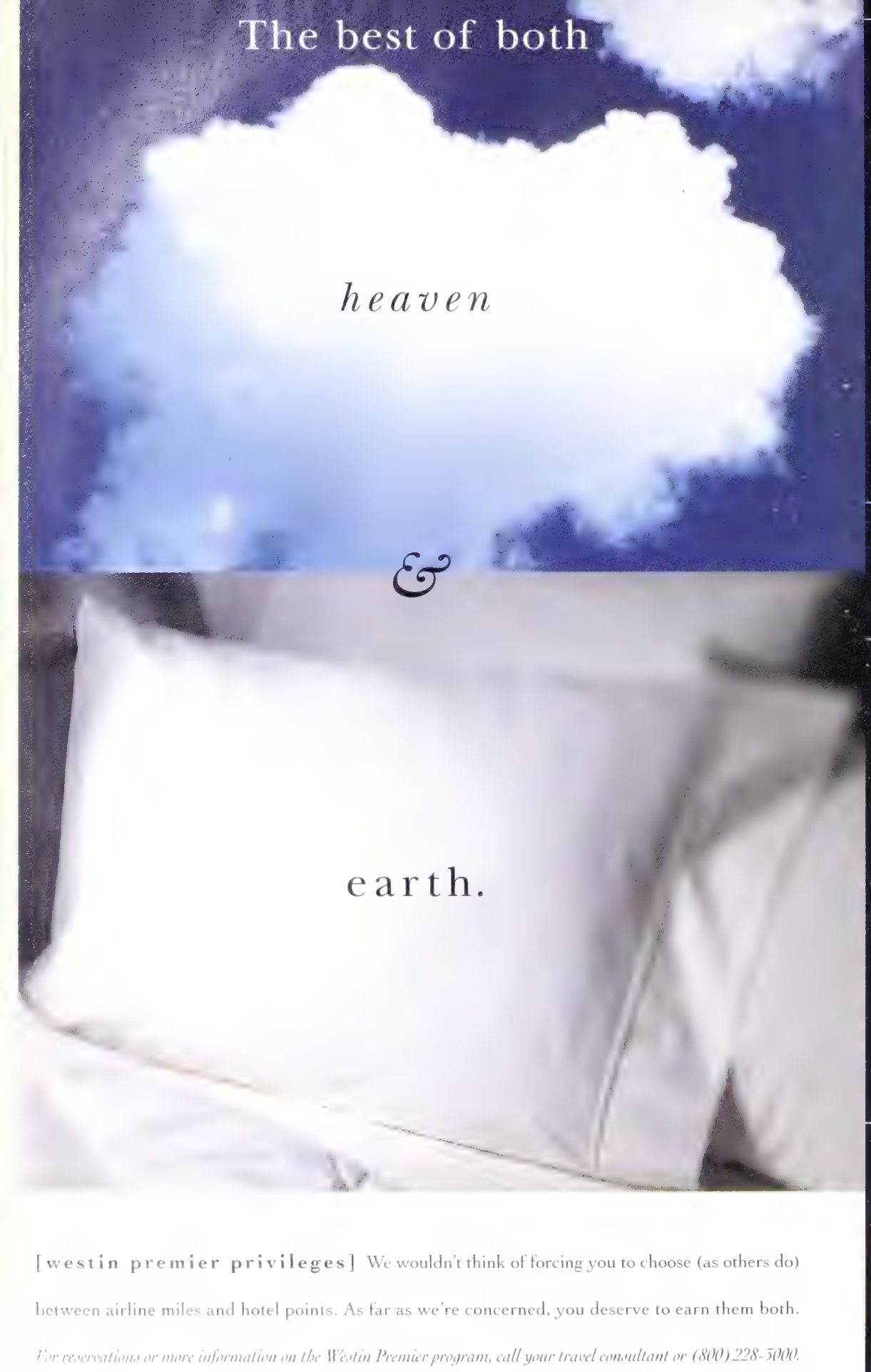

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D BY EMILY T. SMITH

ON, COUCH POTATOES COULD AST THEIR EYES ON 3-D

Three-dimensional television—without the corny red and green glasses—is getting closer. Parviz Soltan, a scientist at the Naval Command, Control & Ocean Surveillance Center in Point Loma, Calif., can project 3-D images inside a plastic sphere about 18 inches in diameter. He's testing a prototype system by tracking aircraft in the San Diego area ı the same radar data used by air-traffic controllers. 'o produce the image, laser light passes through a series of 'ating crystals that splinter it into 40,000 points of light. y fall onto a helix-shaped surface inside the sphere that is ıning too fast for the eye to see. A computer directs the stals to send each point of light to a precise location on the x, thus creating the 3-D image. NEOS Technologies in Melrne, Fla., has licensed the technology from the Navy to d 3-D displays that will probably cost about $250,000. first commercial buyers are likely to be design engirs, says NEOS Vice-President Robert V. Belfatto.

INFORMATION SUPERHIGHWAY AKING ACROSS ASIA?

ıpan is still a developing country when it comes to using ›ersonal computers: It has one-third as many PCs per ta as the U. S. Yet the government is determined not to s the boat in high-speed computer networks. Since last fall, Postal Ministry has relaxed telecom regulations and ›ped out high-speed network "testbeds" in several cities. It plans to connect every home in the country with optic r by 2010—a project that could cost billions.

:ewiring Japan may just be the start. In May, Japan's postal official visited his South Korean counterpart in ul. They swapped data on network experiments and ıned joint seminars and personnel exchanges as the first › in creating networks with common standards and proto-. The next step, say experts, is to draw other Asian coun-s into the digital web to create a pan-Asian Info Highway :he early 21st century. That could be critical for Japanese panies, which are beefing up offshore production to hold n costs and which could use such communication channels ı headquarters to keep product development up to speed.

NY HEATERS COULD MEAN IGE ENERGY SAVINGS

the future, energy efficiency may come in very small ackages. Using microtechnology, researchers at Battelle Pa- Northwest Laboratories in Richland, Wash., are designing ny heat pump to heat and cool buildings. They estimate , it could save up to 50% of the electric energy used in contional heating and cooling systems.

So far, the researchers have demonstrated two parts of the device, the condenser and evaporator. Now, they're building the compressor. Borrowing the semiconductor-industry technique of photo etching, the scientists are carving tiny grooves and channels—about two human hairs deep—into a piece of metal about the size of a dime, which would circulate refrigerant. The tiny heat pumps would be located throughout a building or home. Eliminating duct work in a building would save 20% to 40% of the energy that's lost as air travels through a system. Additional energy savings would come from coupling the pumps with microsensors that would detect the location of inhabitants of buildings and adjust the temperature accordingly. Researchers say they hope to finish a prototype within three years.

ELECTRONIC CALLS FOR HELP THAT ARE HARD TO IGNORE

"Help me, someone, help me." A voice pierces the night at an ear-splitting 112 decibels from a handheld device the size of a cigarette pack. Instantly, a security guard arrives. This, the latest application of microchip technology to the crime-prevention market, is a real attention-grabber.

The unit is loud enough to be heard 300 yards away, says developer Joe Drimer, head of BENCEL Co., an Owings Mills (Md.) company specializing in personal-safety devices. It can be activated intermittently or continuously for up to 90 minutes. Drimer contends that it's a more effective deterrent than home or car sirens, because, he says, no one pays attention to sirens anymore. VoiceDefense can be programmed for either a male or female voice. The summons for help can even be switched to Spanish translation (*Auxilio! Necessito ayuda auxilio!*). It will go on the market next month at $49.95.

THESE FARMS MAY HARVEST WIND —ON THE OCEAN

Windmills, promoted for decades as an environmentally benign energy alternative—and now becoming cost-competitive—are under attack by environmentalists. In Britain, the sight of windmills in the much-venerated countryside has triggered opposition that has blocked the building of several windmill "farms."

In response, Tecnomare and British Maritime Technology have designed an out-of-sight windmill—one that floats on the sea. The 45-meter-tall device has the same 30-meter blade conventional land mills have, and a farm of nine windmills could supply a small town's electricity. Unfortunately, power would cost up to two times more per kilowatt than power from a land-based farm—reflecting the cost of linking the windmills to shore. So Britain's Trade & Industry Dept., which put up half of the $1.125 million to design the windmills, won't fund construction. Now, the two companies are looking to the European Union and to private industry for $45 million to finance the first floating farm.

CABLE'S BRIGHT PICTURE FADES TO GRAY

Rates have been slashed, megadeals deep-sized, ratings clipped—and rivals smell blood

Jerry Seinfeld is going to tell jokes. Larry King will host a talk show with such celebrity guests as Ted Turner. And John Mellencamp will rock 'n' roll. But visitors to the 1994 national cable convention are likely to identify most with another scheduled event: Little Richard performing at a blues bar.

Cable-TV executives are in such a funk as they prepare for their annual meeting on May 22 that not even the New Orleans locale or record turnout may lift their spirits. One can understand why: Since last year's meeting in San Francisco, the federal government has slashed cable rates by 17%, several lucrative deals between cable and telephone companies have foundered, and some of cable's best-known networks have lost viewers.

NASTY POTHOLES. Last June, cable executives spoke grandly of their central role in building the Information Superhighway. Now, they're more worried about faltering credit ratings and their inability to launch new networks because of scarce channel capacity and even scarcer funds. "I'm more concerned about the financial state of the industry than I've been in the last 10 years," says Steven Rattner, a general partner at Lazard Frères & Co. who brokers cable deals.

It's hard to weep for an industry that still rolls up profit margins of 40%. And cable has weathered previous storms, such as the credit crunch of 1990. But given its track record of unbridled growth and the recent euphoria over digital technology, cable has unquestionably hit a wall—perhaps the biggest in its three-decade history. John C. Malone, Gerald M. Levin, and other captains of cable yearn to be the vanguard of an information revolution. By slashing an estimated $3 billion from the industry's $20 billion in total revenues, though, the Fede Communications Co mission has thrown c water on their drea of building vast inter tive networks.

STAR WARS. The te phone companies, mea while, are forging ahe with plans to offer panoply of video s vices. After two years nosing around the p gramming business, B Atlantic Corp., Sou western Bell Corp., a other Baby Bells see emboldened to get in the video business—w or without cable. "W absolutely feel more co fident," says James Cullen, president of B Atlantic, which called a $21.4 billion merg with Tele-Communic tions Inc. after t February rate cut.

Bell Atlantic is sper ing $11 billion on vide ready networks over t next five years and ready is testing vid services in the subur of Washington. U West Inc., which has $2.5 billion investment Time Warner Inc., spending $750 milli over the next two yea to upgrade its network It plans its own intera tive test late this su mer in Omaha.

If that's not bad enough, new and c competitors are assailing cable in i own backyard. Hubbard Broadcasti Inc. and General Motors Corp.'s Hugh Communications are ramping up direc broadcast satellite operations, which w offer such networks as HBO and MTV competitive prices. And the broadca networks—which cable executives us to dismiss as pterodactyls—have stag

meback. Powered by hit shows and iveting Winter Olympics, the Big ee's share of the prime-time audi- e rose from 60% to 61% in the 1993- eason. Basic cable, by contrast, was at 22% (chart). Some networks, in- ing CNN and ESPN, even lost viewers. able operators blame the poor rat- on several factors, including new rules that forced them to change position of cable services on the TV But they worry that cable has be- to stagnate because of a lack of programming services. "We're so emated that we haven't been able add any new c services," s Charles F. n, chairman of levision Sys- s Corp., the t-largest cable ator.

ndeed, Turner adcasting Sys- Inc. and USA work are the programmers have launched or basic ser- s since Con- s reregulated e in 1992. And r new offer- —the Cartoon Network and Sci-Fi nnel, respectively—have struggled ain distribution from operators who lower rates will make them unprof- le. As a result, Turner and other programmers are casting about for avenues of growth (page 132).

NG WOLF? If Turner is feeling the h, Cablevision and other operators caught in a vise. Dolan is spending million this year to upgrade his ems on Long Island, N.Y., and else- re with fiber-optic wire. But the pany already is highly leveraged, after the FCC rate-slash, Moody's stors Service downgraded Cablevi- s debt. To mollify Wall Street, Dolan unced the first layoffs of his career, employees out of 3,000, ave $20 million.

CI and Time Warner have further than Cablevision, utting their capital spend- programs (table). TCI says as suspended, though not eled, $500 million of its billion spending plans ding clarification of the rules. And Time Warner le says its $100 million ack (out of $800 million) 't affect its deployment of r-optic wire or its ambi- s test in Orlando. Instead, e Warner won't purchase as many trucks or wire remote areas.

With their noisy announcements, both companies are engaged in some antiregulatory posturing. Still, the cumulative effect of such cutbacks will slow cable's construction of the Information Superhighway. Cable analyst Paul Kagan Associates figures that a $3 billion decline in revenue could cause the industry to delay wiring some 11 million homes—or 15% of homes passed by cable—for advanced video services. Cable executives argue that the FCC is dealing a blow to America's information infrastructure. "The Information Superhighway is all but dead," declares Marc B. Nathanson, chairman of the 12th-largest operator, Falcon Cable Systems Co.

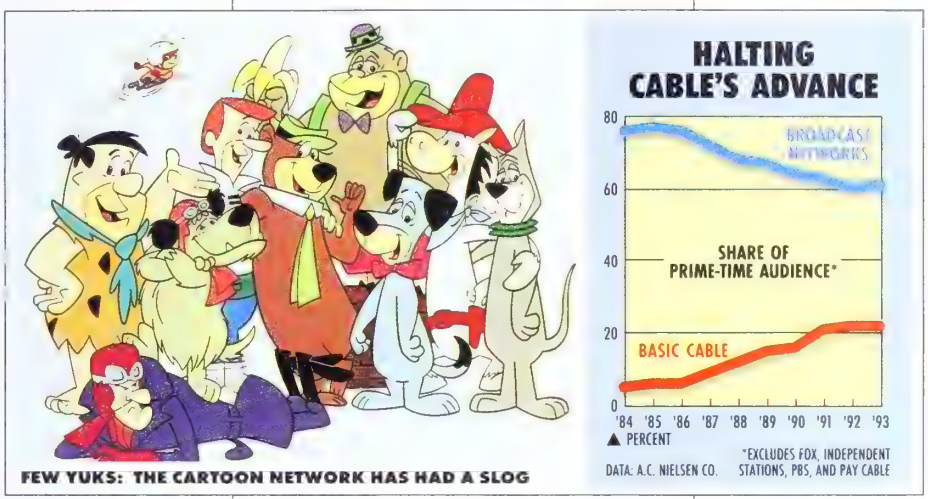
In truth, the highway will continue to be built. It's just that the cable companies may end up playing a supporting role. "The cable industry is in danger of being steamrollered by the phone companies," says John Waller, who brokers cable deals. Competition has already replaced cooperation in the wake of the failed Bell Atlantic-TCI deal and a scuttled alliance between Southwestern Bell and Cox Enterprises. Bell Atlantic is still open to cable investments, but it is focusing on less costly joint ventures.

Just as the Baby Bells have an advantage over cable, big cable companies now have an edge over smaller operators. Michael Garstin, a cable banker at Daniels & Associates, points out that TCI and Time Warner draw enough of their earnings from unregulated businesses, such as TCI's Liberty Media Corp., to withstand a rate cut. By contrast, mom-and-pop cable systems will suffer the full brunt of a 17% hit. As a result, he says, many will end up selling out to larger rivals.

WORKING THE HILL. Cable executives aren't taking all this lying down. They have launched a full-court press to influence future regulation by urging the FCC to give operators incentives to add new services. And they support a bill in the U.S. Senate that would allow cable companies to offer phone service in their regions two years before the Baby Bells can offer video. After years of poisoned relations with Washington, cable executives are hopeful: "There have been indications from the FCC that the rate cuts are behind us; now let's move forward," says Brian L. Roberts, president of Comcast Corp.

Meantime, Comcast and other operators are scrambling for growth in other areas. They're expanding aggressively overseas, where telecommunications markets are less regulated. At home, they're focusing on adding such unregulated services as premium and pay-per-view channels, and transactional businesses, such as home shopping. This is an unexpected bonanza for premium services such as HBO. Home Box Office Inc. Chairman Michael J. Fuchs says he considered starting a mini-pay channel—roughly $5 vs. $9 to $12 a month—to sell to hungry operators. Instead, Fuchs is dividing HBO into separate premium channels. Other pay services also have good prospects: The Golf Channel has raised $60 million from six cable operators.

With the growth of such pay services, basic networks will be hard-pressed just to hold on to their audience. Some are responding by starting spin-off channels. The Arts & Entertainment Network, for example, plans to launch a second service, the History Channel, this fall. Because of the rate cuts, says



FEW YUKS: THE CARTOON NETWORK HAS HAD A SLOG

A BIG COMEDOWN

Cutbacks by leading cable operators

TELE-COMMUNICATIONS (10.2 million subscribers) Suspended $500 million of capital spending. Says regulations could cost it $300 million, or 16%, of 1993 cash flow.

TIME WARNER CABLE (7.1 million subscribers) Cut $100 million from $800 million capital budget. Analysts estimate 1994 cash flow will drop $90 million, or 9%.

CABLEVISION SYSTEMS (2.3 million subscribers) Laying off 160 staffers, out of 6,000, and revising employee benefits to save $20 million annually.

SOURCE: COMPANY REPORTS, BROWN BROTHERS HARRIMAN, OPPENHEIMER & CO.

A&E President Nickolas Davatzes, the new network will take one-third longer to turn a profit.

Notwithstanding the Cassandras in the cable industry, some experts believe that the FCC rulings will actually have some unintended benefits. In seeking new sources of unregulated revenue, says Rattner, cable companies could develop the next generation of programming concepts—raw material for the Information Superhighway.

In addition, cable executives point out that their programming, technology, and systems are still plenty attractive to other players who want a lane on the data highway. Privately, they predict a round of deals between cable and long-distance phone companies such as MCI Corp. and Sprint Corp. Certainly, the Baby Bells aren't about to claim victory: "This is a resilient group of entrepreneurs," says Cullen, "who've managed to find their way around and through a lot of obstacles."

Still, think back just six months, when the cable industry's elite seemed to own the world. Comcast's Roberts was in the thick of a $10 billion battle for Paramount Communications Inc. Cablevision's Dolan was entertaining multi billion-dollar offers for his company. And TCI's Malone had engineered one of the largest deals in U. S. corporate history. It will take more than Cajun cooking to bring back those highs.

By Mark Landler in New York, with Ronald Grover in Los Angeles and Kyle Rebello in San Francisco

WHY IS THIS MAN SMILING?

For an impresario such as Ted Turner, the Apr. 14 launch of Turner Classic Movies was a messy affair. Standing on a platform in Times Square, Turner pulled a ceremonial lever to switch on his new cable network. But just then, two taxis crashed less than 100 feet away. Transfixed by the celluloid icons on a giant TV screen above the square, Turner seemed not to notice.

It's like that these days at Turner Broadcasting System Inc. As the cable-TV industry crashes around it, Turner is racing to launch new networks, break into overseas markets, and expand beyond cable. His urgent strategy underscores the dilemma facing cable programmers: Turner's networks—CNN, TBS, and TNT—are still the engines of his empire. But reregulation has slowed their growth and made it tough to start successful services.

REAL TROUPERS. Turner Classic Movies, for example, is being launched with only 1 million subscribers. And 800,000 of those are getting it via satellite, not cable. Contrast that with Turner's TNT movie channel, which debuted in 1988 with a record 17 million subscribers. Turner executives concede they have struggled for distribution. But they say cable operators will be hungry for their offerings once the dust from reregulation settles and channel capacity expands: "The cable industry can't shut itself down," says Terence F. McGuirk, executive vice-president of TBS. "It has to continue fostering new programming."

While McGuirk mulls new channels—he says he has looked at 20 proposals in the past year—TBS had better pay attention to its core franchises. Ratings at CNN declined in the 1993-94 season partly because Federal Communications Commission rules forced operators to move the channel around on the TV dial. However, viewers also flocked to a rejuvenated CBS and its rival broadcast networks. Flat advertising revenue at both CNN and Headline News Network helped to drive down Turner's operating profit from $80 million in last year's first quarter to $30 million in the 1994 first quarter.

TURNER WITH (FROM LEFT) ARLENE DAHL, JANE POWELL, CELESTE HOLM, AND VAN JOHNSON

To restore growth, the man behind CNN is expanding even more overseas. Last year, Turner launched TNT and his new Cartoon Network in Europe and Latin America. TBS also bought into a German TV news station, its first effort in local news programming. And the company will broadcast to Asia on the new Apstar-1 satellite, competing with Rupert Murdoch's Star TV. How will the Cartoon Network play in Colombia? "No matter what country you're in, Huckleberry Hound is still blue," says Scott Sassa, vice president for entertainment.

In fact, Huckleberry may be blue at home in the U. S. The Cartoon Network, which uses classic 'toons such as *The Flintstones* from Turner's Hanna-Barbera Productions Inc. library, broke even last quarter thanks to high ratings. But limited channel capacity and reregulation means its subscriber base won't budge much past the current 21 million homes.

LOST AIR. TBS's new offerings have also had trouble reaching subscribers because many cable systems are turning over three channels each to new services sponsored by NBC, Fox, and ABC to help settle a legal dispute with the broadcasters. Turner Classic Movies has a breakeven half that of Cartoon. But unlike Cartoon, which is an advertising-supported network, Turner sells TCM as an ad-free service for basic or premium cable.

With all the trouble in cable, it's no wonder Ted Turner has focused much of his attention lately on his recently acquired Hollywood studios, Castle Rock Entertainment and New Line Cinema Corp. He also hasn't given up on owning a broadcast network. And he even looked at Home Shopping Network, a cable service that avoids some of the regulatory woes because it is supported by transactions, not advertising. Turner's future still hinges on programming, though. And until cable's traffic accident is cleared up, he'll have to steer through the wreckage.

By David Greising in Atlanta

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COMEBACKS

A SECOND WIND IN THE WINDY CITY?

"Cash" Mahlmann, former head of the CBOT, tries for a comeback

The secret membership vote is one of the more arcane customs still practiced by the tradition-bound Chicago Board of Trade. When it comes time to elect a new member, a wooden box is passed around among the directors so they can anonymously drop in either a white ball (yes) or a black cube (no) to signify their choice. As four-term chairman of the futures exchange during the 1980s, Karsten "Cash" Mahlmann used to count those balls and cubes. But now, as he tries to recharge a career grounded by scandal, his fate hangs in the balance of just such a vote.

For most of his adult life, the 56-year-old Mahlmann was a fixture on the Chicago commodities scene. A German émigré who started as a runner on the trading floor, he rose to chairman of the Stotler Group, once one of Chicago's top commodities firms. Elected chairman of the Chicago Board of Trade (CBOT) for the first time in 1987, he routinely stormed Capitol Hill to defend an industry under fire. But in 1990, when Stotler imploded amidst charges of financial irregularities, Mahlmann quit his CBOT post, declared bankruptcy, and joined a small trading office in London.

HARD FEELINGS. Since then, Mahlmann has worked hard to gain the confidence of his new bosses at the Dutch banking giant Internationale Nederlanden Bank (ING). They have been happy enough with his performance that they recently tapped him to head their new Chicago trading operations. The one big hurdle is Board of Trade approval. And the secret vote, slated for June, is no sure thing.

Hard feelings persist at the CBOT about the Stotler affair. It didn't help that Mahlmann's application for membership arrived last month just as the exchange agreed to pay a record $300,000 fine to settle regulatory charges stemming from the case (the CBOT is responsible for overseeing the finances of its member firms). Mahlmann has responded with a behind-the-scenes lobbying campaign, hiring well-connected lawyers and asking influential CBOT members for support. But some colleagues aren't buying it. "I was shocked that he's... being brought back," says Gerald F. Corcoran, chief operating officer of R. J. O'Brien & Associates, a midsize Chicago firm. "I can't see people doing business with him."

KARSTEN MAHLMANN IN 1990: ENGULFED IN SCANDAL, HE RESIGNED HIS POST, DECLARED BANKRUPTCY, AND MOVED TO A SMALL LONDON FIRM

Not everyone sees it that way. Supporters portray Mahlmann as an unwitting victim of Stotler's dissolution. Preoccupied with nonstop work at the Board of Trade and a messy divorce, they say, Mahlmann lost control of the firm to rival executives who were later targeted by regulators. Although Mahlmann declined to be interviewed for this story, he has repeatedly denied wrongdoing. And though two key Stotler executives settled charges with the Commodity Futures Trading Commission (CFTC) and the Securities & Exchange Commission, the regulators never accused Mahlmann. Notes Ralph Goldberg, the Board of Trade's second vice chairman: "He had become a passive investor [in Stotler]."

Mahlmann's fall came after an arduous climb to the top. It began in 1957 when the 20-year-old son of a Hamburg grain merchant boarded a U. S.-bound freighter in order to learn the business at the mecca. Mahlmann found a place in the cash grain business—the source of his nickname—buying and selling the actual corn and wheat rather than futures contracts. He lived at the Chicago YMCA and routinely walked to work at 6 a.m. "He got ahead by working all the time while we were going to White Sox games," notes longtime colleague Donald S. White, a Florida grain-market consultant.

Mahlmann joined family-run Stotler in 1963, and though he lacked formal education, he developed into a meticulous administrator. Harried customers, worried about big trades, took comfort in his unflappable demeanor. He prospered, buying a home in a wealthy suburb, and raised three children with his wife Loretta, a Chicagoan he married a year after arriving in the city.

When Mahlmann won his first term as CBOT chairman, his life changed dramatically. He left his wife for a Stotler employee 20 years his junior, a mo

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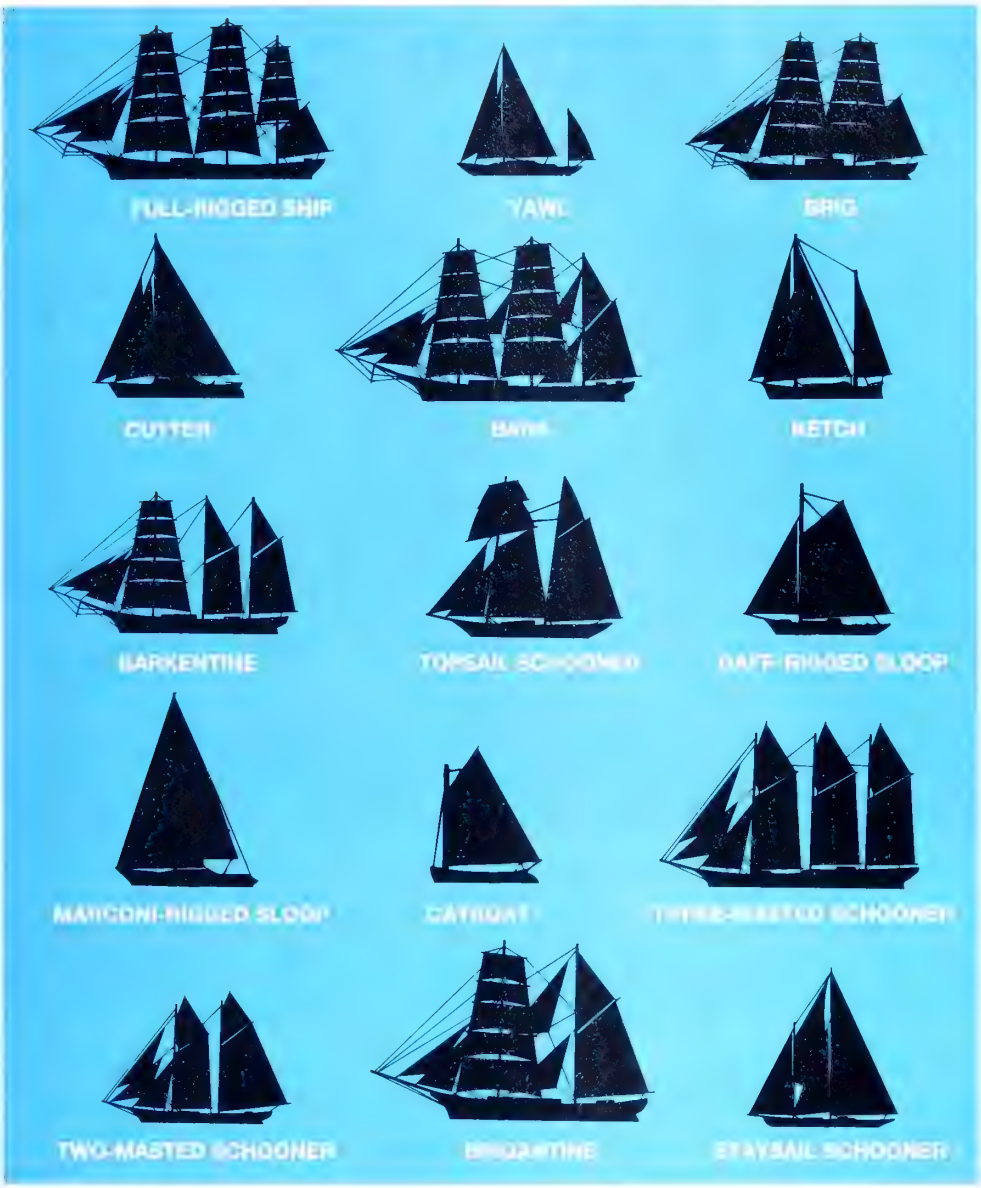

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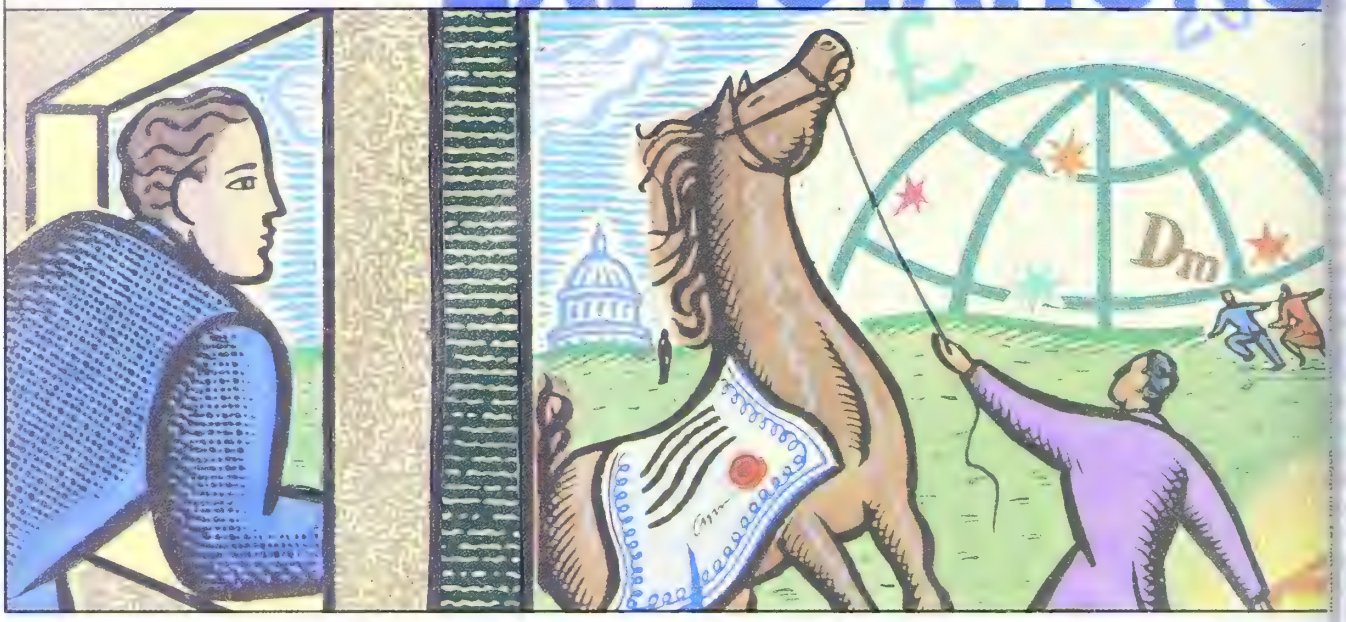
EUROPE'S GREAT EXPECTATIONS



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nds say alienated partners at the
. He became enamored of his role as
istry spokesman, and by the time
ler went public in 1988, he had little
-to-day contact with the firm. Al-
igh he remained Stotler's chairman
largest shareholder, his office was
l for storage. "In hindsight," says
A. Backman, one of his attorneys,
should have just resigned."

s CBOT chief, Mahlmann made more
1 20 trips annually to Washington,
re he helped convince Congress to
ithorize the CFTC, a regulatory body
ıy critics considered too lax. At
ıe, he remained stoic and defiant
ıugh crises ranging from the 1987
k-market crash to the 1989 Federal
eau of Investigation trading-floor
g. Mahlmann put in so many hours
ıecame the first exchange chairman
rded a salary. He moved to a condo
g Chicago's glitzy Gold Coast, trav-
first-class around the world on ex-
ıge business, and indulged his pas-
for imported automobiles.

totler, meanwhile, was plunging
nhill, sapped by a costly expansion
Latin America and an ill-fated buy-
of an Iowa brokerage. Regulators
ged that to meet capital require-
ments, the firm used money from its public commodity funds to support operations. When the charges came to light in mid-1990, Mahlmann tried to hang on as exchange chairman by deflecting blame to other Stotler executives. But fellow CBOT directors forced him out.

His unlikely savior was Leslie Rosenthal, a political foe at the exchange who needed help in his firm's London office.

Will the Board of Trade readmit its former chairman? "He's coming hat in hand," says a friend

"We wouldn't have had a chance at that high-quality a guy unless he was down on his luck," Rosenthal explains. The job was a godsend, allowing Mahlmann to sort out mounting legal woes from a distance. It also provided sorely needed income: His Stotler stake valued at zero, Mahlmann had filed for bankruptcy in 1991 with debts of $2 million and assets of $360,000.

In London, Mahlmann moved into a modest flat with his new wife and distinguished himself by merging Rosenthal's London office into a trading firm later acquired by ING. He expanded the combined firm—ING Derivatives Ltd.—building a franchise among London options traders.

Then last January, the U. S. arm of the Dutch bank bought out another firm Rosenthal had started in Chicago called Quantum Financial Services Inc. Rosenthal left to concentrate on his original firm, and ING decided to give Mahlmann the job. Told the CBOT might block his appointment, the bank decided to persevere. "To make him a scapegoat would not be very American," declares Hans D. Bartges, president of ING Capital Holdings in New York.

Since the vote is secret, there's no telling what will happen in June. Many insiders predict Mahlmann will get the two-thirds margin he needs—as long as he's willing to beg the CBOT's power brokers for a second chance. "He's in the process of making those phone calls," says Rosenthal. "He's coming hat in hand." For Cash Mahlmann, that indignity may be the hardest part of all.

By Greg Burns in Chicago

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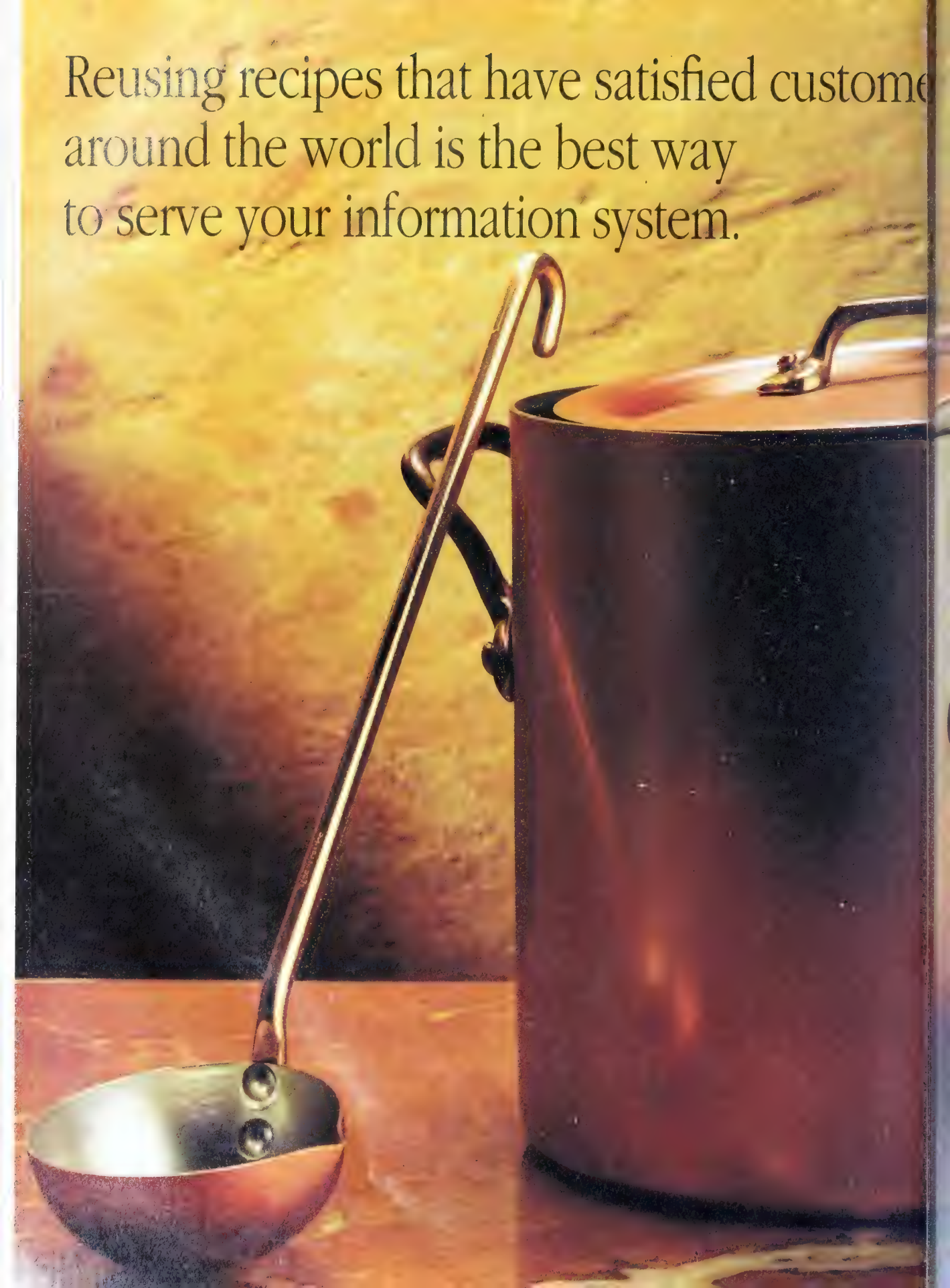

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WIRELESS WORLD

A SPECIAL REPORT

In a few short years, today's personal-communications gear will seem as dated as rotary phones and typewriters. Whatever your needs—e-mail, faxing, on-line information, mobile calling—the world will be right there in your hand. Flawless data transmission will be possible wherever you are, whenever you want.

PHOTOGRAPHS BY JAMES PORTO

D BY AMY DUNKIN

HARDWARE

MART, USEFUL—AND THEY ON'T PUT A SAG IN YOUR SUIT

o one is scheduled to pick up the baby from day care, you sudden- member shortly before lash off to a critical mar- g meeting. So you pull our pocket phone, call spouse's pager, and zap urgent electronic mes- Moments later, a news arrives on the personal l assistant (PDA) inside briefcase. The sales es you're taking to meeting have been ed.

e latest wireless won- are helping busy peo- keep in touch with home and office. No r essential tools just xecutives, these gad- are reinventing rou- communications in that no one could foreseen just a le ago.

DAYS. When the first r communication sys- was activated in Chi- on Oct. 13, 1983, predicted that fewer 1 million people l use such services e year 2000. The re- By the end of 1993, were more than 16 n cellular phone sub- rs, with 14,000 new joining in every day, ding to the Cellular ommunications Indus- ssn.

at's more, nearly 19 n Americans of all s are carrying pag- levices once associat- imarily with doctors, reps, and certain nal elements. PDAs till in their infancy, ey're not that wide- d yet. But as the rs perfect these y communications de- vices, they may become indispensable tools as well. As Herschel Shosteck, a Silver Spring (Md.) wireless communications market researcher, puts it: "Everything in wireless is growing by leaps and bounds."

As usage proliferates, the hardware is getting cheaper, smaller, and more sophisticated. Ten years ago, for example, most cellular phones were "luggable" 8-to-11-pound models that required their own shoulder bag. But today, the most popular style, the handset phone, weighs in at a mere 4 to 6 ounces and fits in a jacket pocket or purse without telltale bulges. Take Motorola's sleek Microtac flip phones, which range in price from $200 to $720. The mouthpiece folds over the keypad to make the unit compact and to protect the delicate push buttons when the phone is not being used.

A small size doesn't mean the buyer has to skimp on features. At a suggested retail price of $799, Nokia Mobile Phones' Nokia 232 measures less than six inches in length but incorporates a three-line liquid crystal display screen that keeps users informed of signal strength and battery life. The easy-to-read display also helps owners program often-called numbers and lock up codes to prevent unauthorized use. The phone has a built-in jack that connects to specially designed computer modems so laptop users can send and receive e-mail and faxes wirelessly.

NEARLY FREE. It's hard to consider the cost of a cellular phone without factoring in the monthly service charges. Often, service providers pay commissions to retailers to get them to sign up new customers. This allows retailers to practically give away the phones as a sales incentive. It helps to offer phones that have a lot of built-in features. The Audiovox MVX-750 is used by many cellular service providers for its array of options, including a silent ring that causes the device to flash on incoming calls. The phone is also geared to take advantage of extra services that a provider may offer a new subscriber. One of the most useful directs incoming calls to a voice-mail system when-

WIRELESS WONDERS

Make-model/Price*	Features
CELLULAR PHONES	
NOKIA 232 $799	The 6.5-oz. unit connects to a laptop computer to send data. Can program four numbers for one-touch speed dialing.
AUDIOVOX MVX-750 $499	Has "silent ring" option that alerts owners to incoming calls with lights.
PAGERS	
MOTOROLA ADVISOR $349	By far the most popular model offered. A four-line LCD screen displays messages and e-mail as well as phone numbers.
MOTOROLA MEMO EXPRESS $250	A two-line LCD screen scrolls to reveal text messages. Can store more than 15 messages; comes in variety of colors.
PDAs/PERSONAL COMMUNICATORS	
APPLE NEWTON MESSAGE PAD 110 $800	Equipped with a "paging card," the Newton can receive stock quotes, news flashes, and e-mail. To send messages still requires an optional modem card.
BELLSOUTH SIMON $900**	A phone that can act as pager, e-mail terminal, and fax machine. Touch-sensitive and built-in software helps owners keep track of phone numbers and appointments.
MOTOROLA ENVOY $1,500**	A "next-generation" PDA due out soon, its focus is wireless data communications. Special software will allow for connection to online services such as America Online and AT&T's PersonaLink.

*Suggested retail. Actual prices vary **Estimated

DATA: BUSINESS WEEK

ever the phone wanders out of range of the cellular network. The subscriber can get voice-mail access at the touch of a button. Retailing for $499, the MVX-750 can be had for almost nothing when offered as part of a service package.

TAILORED PLANS. Cellular rates vary according to where you live and at what time you tend to make and receive calls. In the metropolitan New York area, for example, consumers have a choice between Nynex—the local Baby Bell—and Cellular One, a unit of McCaw Cellular Communications.

Each company offers several service plans. Generally, frequent users pay higher monthly charges and lower per-call rates, while people who have cellular phones for the occasional emergency—say, when their car breaks down on the road—pay less per month but more per call. Under Nynex's Leisure plan, for example, subscribers pay 90 cents per minute of talk time during business hours on top of a $30 monthly access fee. Under Nynex's Simplicity plan, peak rates range from 41¢ to 60¢ per minute and $26 to $40 per month, depending on the amount of time one spends on the telephone.

COLORFUL BUNCH. If you need to be in touch but don't require two-way voice communication, pagers are much more economical. Monthly service fees run $8 to $15 on average, a fraction of the cost of cellular. The pagers themselves are also much cheaper. A simple beeper that alerts you to a message received at an answering service can be bought for as little as $4; more typical models cost around $50.

With a push to the mass market, Motorola's $119 Bravo pager comes in vibra pink, bimini blue, totally teal, and other designer colors. Bravos also play music or vibrate to signal a message. But even as pagers make a fashion statement, they are also becoming a lot more functional.

The hottest selling beepers are "alphanumerics" such as Motorola's $349 Advisor with four-line liquid crystal display screens that can communicate detailed text messages—"3:00 with Bob Smith changed to 4:00"—when connected to paging services such as SkyTel. Other nationwide paging companies, such as MobileComm, offer news bulletins and stock quotes.

Such capabilities in the wireless world are only the beginning of a communications revolution. With the convergence of the personal computer, telecommunications, and consumer electronics, expect an array of "intelligent" electronic devices that can handle your appointments, translate your written commands to type, send out your e-mail and faxes, and retrieve news and other information.

While Apple Computer's original Newton Message Pad was a dud, the company recently introduced a version that does a better job recognizing an individual's handwriting and boasts a sleeker design.

More important, to address the issue of wireless communication, owners can get an optional $200 Motorola pager card that receives alphanumeric messages from MobileComm. The specially designed card can transport the message into the Newton, making it easier for busy mobile workers to organize their contacts. If the message [illegible] you, for example, to c[illegible] customer at 10 a.m. on T[illegible] day, the user transfers [illegible] message to the electr[illegible] datebook, and the New[illegible] intelligence will block out [illegible] time to make the call.

And by storing all the [illegible] es from a particular clien[illegible] der the name, as well as [illegible] notes of conversations [illegible] dates and times called, u[illegible] have a handy recor[illegible] how much time [illegible] spent with the par[illegible] lar person.

Although that m[illegible] the Newton a beefe[illegible] one-way pager, o[illegible] manufacturers are w[illegible] ing hard on giving [illegible] true two-way wire[illegible] communications ab[illegible] Motorola, for insta[illegible] is expected to begin [illegible] ing its Envoy PDA [illegible] the end of this sum[illegible] for an estimated $1,[illegible] The device will fea[illegible] a special wireless [illegible] dem, which allows [illegible] sonal computers [illegible] share files and data [illegible] telephone.

In fact, when [illegible] leased, the Envoy [illegible] come bundled with [illegible] ware that will al[illegible] owners to tap into [illegible] line services such [illegible] America Online [illegible] AT&T's PersonaLink [illegible] vices—information b[illegible] that traditionally [illegible] served only PCs.

BLURRED LINE. Other [illegible] vices, such as [illegible] South's Simon, will [illegible] the line between cellular t[illegible] phone, pager, and PDA. [illegible] $900 unit, which is also [illegible] pected to hit the market [illegible] the end of this summer, lo[illegible] more like a traditional cell[illegible] phone. Instead of a keyp[illegible] however, owners would [illegible] phone numbers using a tou[illegible] sensitive screen that can [illegible] display faxes, e-mail, and [illegible] phanumeric pages.

Simon, designed by [illegible] has built-in software that [illegible] keep track of your appo[illegible] ments and contact lists. [illegible] one step closer to a dev[illegible] that does it all. *Paul [illegible]*

BY FALL, LOOK FOR PDAs THAT CAN TAP INTO ON-LINE SERVICES

You're looking at several market views — in search of a single investment.

As a global investor managing a multi-asset portfolio, you have a view on many different markets. Right now, for instance, you're bullish on bonds and bearish on the bank sector.

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DATA SERVICES

DIAL 'R' FOR REVOLUTION

If you spend much of your working life on the road, you know how important cellular phones, pagers, and beepers are for keeping in touch with the rest of the world. The problem comes when you want to get your hands on that big report the boss issued yesterday or the dozens of messages left on your personal computer. Most cellular services are great when it comes to conversation but leave a lot to be desired for sending and receiving the written word.

Not for much longer, though. The wireless world is rapidly filling up with tongue-twisting acronyms that in the final analysis all mean the same thing: Technology is advancing to the point where the flawless transmission of data will no longer require a hard-wired phone or computer network. It's not quite there yet, but by next year, road warriors will be arguing over the relative merits of such new wireless data services as CDPD, SMR, and CDMA.

NO STATIC AT ALL. They're not as daunting as they sound. All these new services are different types of digital transmission technologies. That means they break down data into ones and zeros that can be sent via radio waves without static or interference. Subscribers can then pull down anything from brief e-mail messages and stock quotes to lengthy documents on their portable fax, laptop computer, mobile phone with a digital readout window, or one of the new personal digital assistants (PDAs) hitting the market.

For the moment, just two digital services are widely available that are designed for two-way data transmission. ARDIS, available in about 400 regions around the country, and RAM Mobile Data USA, in the 200 largest cities, both use a nationwide syst of radio towers to send t only—neither can ca voice—to dedicated handh computers. RAM has the fa transmission speed, wh ARDIS has the stronger sig giving it better building pe tration. Both are used ma by field technicians and sa representatives to send receive customer data.

If you don't want suc specialized service, you co just send faxes and the over existing analog cellu phone systems. But analo subject to interference t causes transmission bre and glitches. It's not suc

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problem for a voice call—you can just repeat the sentence. But interference can be death for critical documents.

The cellular phone industry wants to rectify this problem by building new digital networks. This is where the battling acronyms come in. Cellular operators are divided over two different digital standards, TDMA (for time division multiple access) and CDMA (code division multiple access). The technical differences probably aren't worth worrying about, only the end results. CDMA offers up to 20 times more capacity than conventional analog cellular systems and is meant to be more secure from eavesdropping. But the technology has yet to be thoroughly field-tested. TDMA, though it offers only a sevenfold increase in capacity over analog, is already up and running in several major markets. It has been embraced by the Cellular Telephone Industry Assn. along with McCaw Cellular and Southwestern Bell, the nation's two largest cellular operators.

PREGNANT PAUSES. Still, CDMA is being considered by several other large operators. AirTouch Communications, Pacific Telesis' cellular operation that was spun off earlier this year, is promising a 1995 rollout of a CDMA-based network. If all this either/or between the two standards is giving you a headache, you can at least be relieved to know that most handset manufacturers are coming out with phones that can seamlessly switch between the two.

Ultimately, though, digital cellular is really not the best medium for data. Its main purpose is to improve the quality of voice transmission; cellular is a slow and costly method for sending documents. Cellular subscribers who send a lot of data might be better off using to a service that employs yet another acronym, CDPD (cellular digital packet data). CDPD technology folds data into electronic envelopes that are sent at very high speeds during pauses in cellular-phone conversations. By adding it to an existing analog cellular system, operators can transmit data eight times faster without having to go to the trouble of building a whole new digital network.

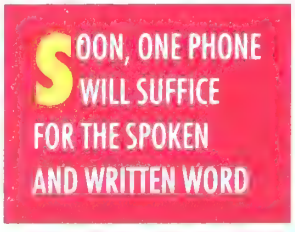
McCaw's CDPD service, called AirData, is the first on the market and so far is only available within three cities: Dallas, Seattle, and Las Vegas. Nationwide availability is taking longer than expected because of technical glitches and disagreements on equipment standards, but McCaw is promising to have 105 cities on its network by yearend. Bell Atlantic also just started a CDPD service, AirBridge, in Baltimore, Pittsburgh, and Washington. GTE is planning to launch a third CDPD service, called Mobilenet, in June.

You could just forget about cellular altogether. Instead, consider SMR, or specialized mobile radio. This is a two-way radio dispatch service widely used for years by truck and taxi fleets. Now, three operators—Nextel, Dial Page, and CenCall—are converting their SMR networks to digital so they can deliver both voice and data to a single device. SMR systems have less radio spectrum to work with than cellular has, but the signal can roam 25 times farther, which means it's cheaper to build a national network.

WIRELESS DATA SERVICES: LOTS OF CHOICES COMING

Type	Possible uses	When available
RADIO-BASED DATA NETWORK Nationwide system of radio towers that sends data only to handheld computers	Customer data for field workers	Now from RAM Mobile Data USA, ARDIS
CELLULAR DIGITAL PACKET DATA Very fast data service being added to existing cellular phone networks	Instant credit-card verifications, database access	Slowly rolling out now, with McCaw Cellular Communications in lead
SPECIALIZED MOBILE RADIO Two-way radio voice-dispatching service used by taxis and trucks that is being converted to digital	Paging, e-mail	Nationwide network being put in place over next two years led by Nextel Communications
DIGITAL CELLULAR Conversion of existing analog cellular voice service to digital	Faxes, e-mail	Rolling out now in many markets by most cellular operators
PERSONAL COMMUNICATIONS SERVICES Like digital cellular but lower-powered	Stock quotes, e-mail	FCC to auction licenses later this year, service two to three years away

DATA BUSINESS WEEK



SMR operators say that means their service will 10% to 15% less than cell Nextel Communications, largest SMR operator, h licenses covering 21 state it shouldn't have any pro offering nationwide roa once its network is up.

POCKET OFFICE. But SMR other drawbacks. Cellular phones won't work wit and the handsets that do bulkier and more expens And so far, digital SMR vice is available only in Angeles. Nextel says its network will be in plac two years.

Wait a little longer, tho and you could switch to another acronym. PCS, for sonal communications ser es, is expected to be all rage in the wireless worl two to three years. The t is used to cover a wide ra of wireless services inclu paging, cordless phones, data transmissions. Like c lar, PCS will use radio wa but the transmission tow will be lower-powered closer together, so that handsets can be smaller service costs cheaper. A PCS will be digital right f the start. The only hol at this point is the Fed Communications Commiss which has delayed the auc of 2,500 spectrum licenses PCS once, to this fall at earliest, and may again. S one knows for sure when technology will arrive. But most every cellular oper plans to put in a bid, convinced as they are that PC the wireless service likely attract the most consumer

Wireless visionaries see ushering in an era of phone for both the home the road. By the end of decade, so the vision goes, scale consumers won't s out of the house witho PCS-based PDA in their poc that can take voice calls, play street maps, coll e-mail, and keep track of pointments and schedules. then, with all the wirel data options available, may never need to go to office again. *Catherine Ar*

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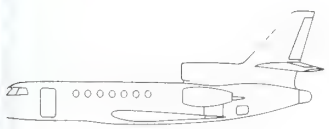

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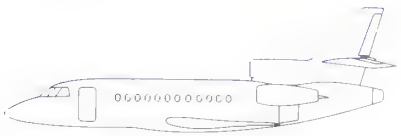

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142E5

SECURITY

IT'S 10:30. DO YOU KNOW WHO'S USING YOUR CELLULAR CODE?

Cellular phone owners who start to receive a slew of wrong-number calls or hang-ups might want to peruse their next monthly bill extra carefully. They might be victims of a growing high-tech crime. With sophisticated scanners, electronically adept schemers are filching the codes needed to create a "cloned phone" that others then use to make and receive unauthorized calls. Since the clone shares the same codes and phone number as the original phone, any calls to the clone will ring on both phones. And any calls dialed from the clone will get billed to the legitimate subscriber.

Stolen identification codes present a thornier security breach for the cellular industry than electronic eavesdropping does. While, in theory, corporate spies could pluck valuable proprietary information from unguarded airwaves, it's more likely that overheard cellular conversations will simply prove embarrassing. Just ask Britain's Prince Charles, whose amorous words to a female friend over a cellular phone became tabloid fodder last year.

NO QUICK FIX. Back in the U.S., both the federal government and the cellular industry took action to secure the wireless paths early on. In 1986, the Electronic Communications Privacy Act made it a federal offense to eavesdrop on any wireless conversation. And in 1992, an amendment banned the further sale and private possession of radio scanners and other devices that can tap into cellular-airwave frequencies.

Of course, well-meaning laws haven't deterred crooks. Since cellular phones are basically radio transmitters, it's difficult to track down airwave pirates who already own the necessary scanning equipment. And it's virtually impossible to stop thieves from stealing codes without expensive network equipment changes or disrupting service to millions of cellular phone owners. Unfortunately, there isn't even a cost-effective device you can attach to your existing phone to scramble the codes.

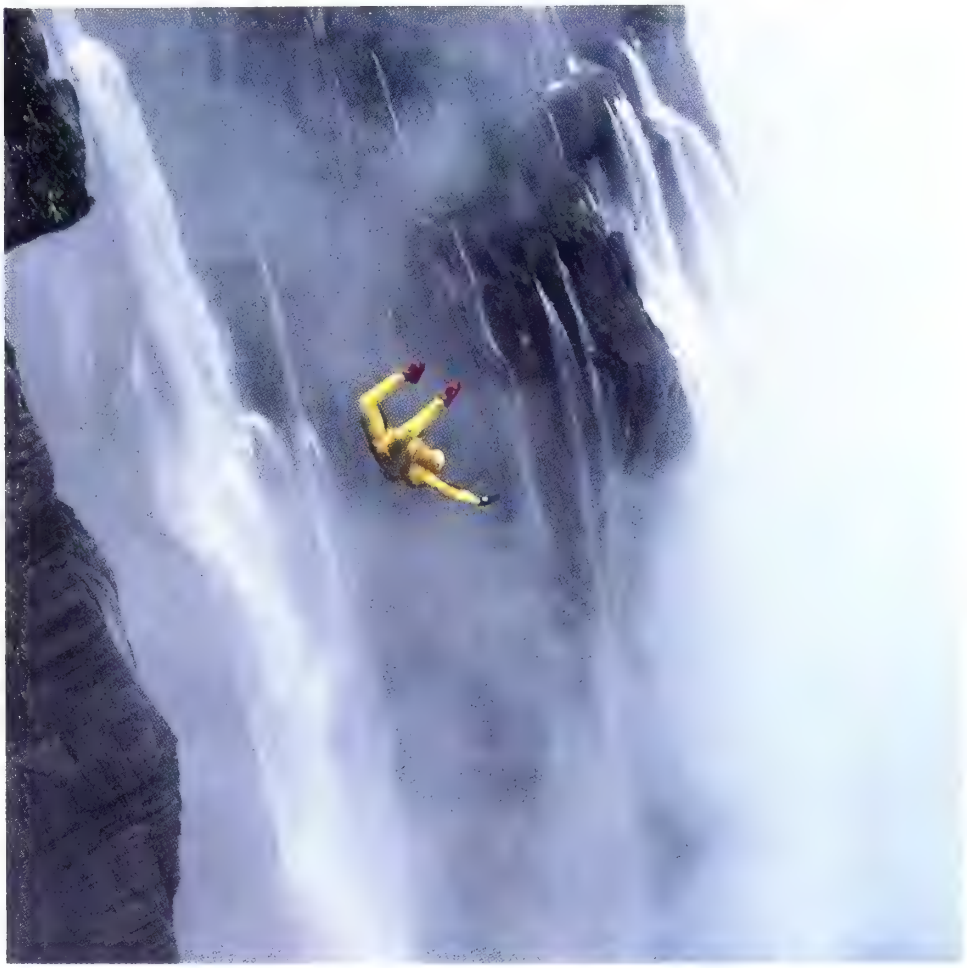
As new digital cellular networks are installed in the U.S. over the next few years, the hope is that fraud will become less of a problem. Since those networks transmit conversations broken up in the computer language of ones and zeros, casual eavesdroppers would hear only "noise" and not actual voices. Digital transmission also offers other tricks to thwart thieves. By breaking up each code among different radio frequencies according to a random pattern, digital networks make it harder for someone to find a complete code to steal. Providers might also have an easier time pairing codes with a particular phone's unique frequency characteristics, creating an electronic "fingerprint" that no cloned phone could ever recreate precisely.

SLEUTHING SOFTWARE. In the meantime, cellular companies are doing all they can to stem the estimated $300 million in losses incurred annually as a result of the illegal phones. Many providers are installing new computer software that can spot suspicious activit a most immediately. "A e years ago, we could only o a fraudulent account by o ing at a subscriber's mot bills," says Stewart Mah director of fraud preven for White Plains (N.Y.)-b NYNEX. "Now, we can clones on our network w 30 minutes." NYNEX rout alerts subscribers whe spots unusual phone act in attempts to stop any s before they get out of ha

But until foolproof s guards are in place, code b bers will be on the loo for new marks. Cellular-p companies recommend th avoid falling victim to cro schemes, you should:

- Keep your subscriber ag ments and any other d ments that contain your c in a safe place.
- If you don't plan on ma overseas calls from your c lar phone, have the prov block access to internati dialing—making your c less valuable to illegal us
- Immediately report a los stolen cellular phone to service provider. Also, re any suspicious activity on line. If you receive freq wrong numbers or hang-u it could mean someone is ing to reach a cloned p that has your codes.
- Challenge any question charges on your monthly Service providers are a of the fraud issue, and if get ripped off, they will u ly be willing to waive charges.
- Protect the phone itsel well as the codes. When don't need it, lock the p away in a drawer or b case. If it's a car phone, move the antenna to pre unauthorized use. *Paul*

Assume this is a business risk worth taking.



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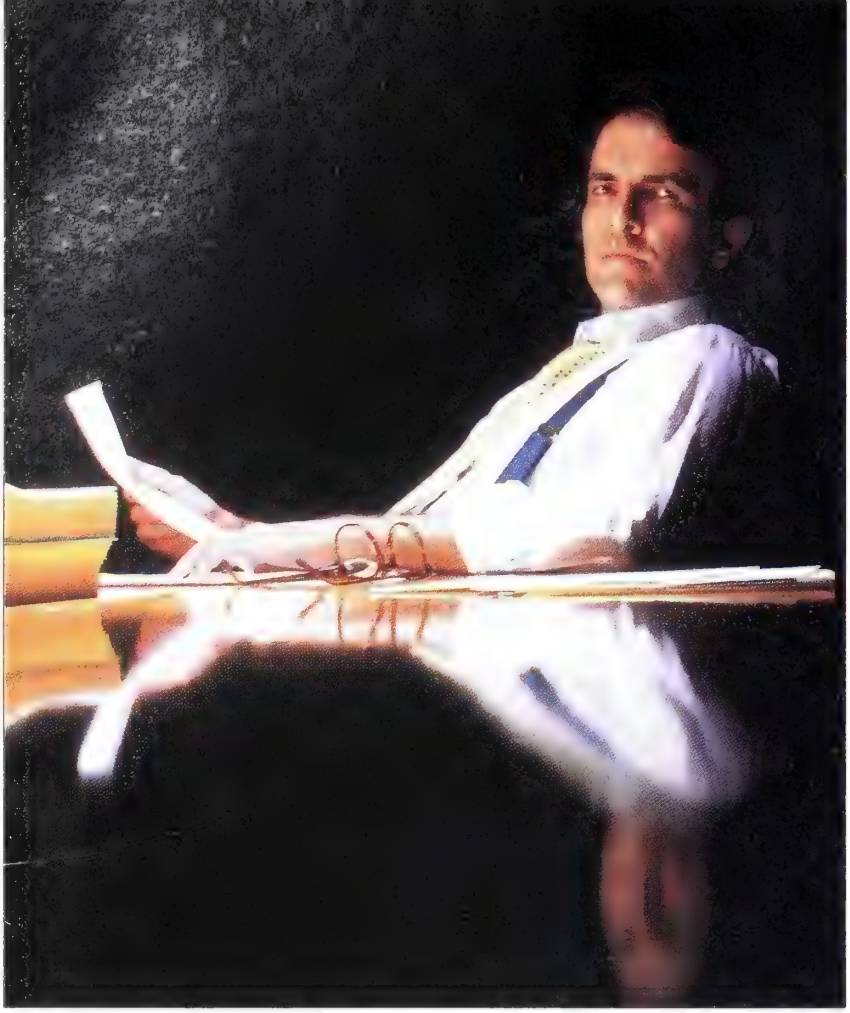

His name is Allan.
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He doesn't play golf
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He plays hardball.

He's looking for answers.
So if you've got questions
they'd better be good one

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142E8

SATELLITE TV

HE INCREDIBLE HRINKING DISH

ver the years, disgruntled TV junkies put off by excessive hly cable bills, limited ramming, and shoddy mer service have ditched cable companies and ed satellite systems in. Satellites also appealed be viewers who were in not wired for cable. satellite gear is exve, and the monster antennas needed to ire signals from the id satellites hanging 0 miles above the are not always prac. For one thing, a tree uilding can block re. n. Also, a number of unities deem huge s eyesores and re their use.

e industry is about sh up new alterna to cable TV that may iate a few hassles of igger systems. The al Satellite System from DirecTv, a sub y of GM Hughes ronics and a joint ire from Primestar ers promise to make on so-called direct cast services, or DBS.

ACE TYKE. The DSS sys which will be starting in five test sites, before a al rollout begins in the summer, employs an 18 metal antenna and spe atellite receiver. The sys promises to eventually er more than 150 chan f laser-disk-quality TV im and compact disk sound. e pizza-pan-size antenna ires signals off higher red digital Ku-band es satellites. The small na is easily concealed in some cases can be ted on a terrace or win dowsill, though it must have an unobstructed view of the southern sky. The basic RCA DSS receiver and dish start at $699. RCA claims a DSS installation will cost up to $200.

DSS subscribers who want most of the channels they've become accustomed to on cable must tap two programming sources. For $7.95 per month, Hubbard Broadcasting's USSB offers a basic package including MTV, Nickelodeon, and Lifetime. USSB packages that add premium channels such as HBO and Showtime cost up to $34.95 per month, though viewers will have the TV equivalent of a "multiplex" theater, with five separate HBO channels to choose from, for example. USSB will also serve up pay-per-view movies. DirecTv provides the other DSS offerings. Its current lineup includes CNN, ESPN, and the Weather Channel and costs $21.95.

To figure out what's on, subscribers can tap into an interactive onscreen program guide. Also, CommTek Communications, a publisher of guides for C-band systems, has just unveiled *Satellite Direct*, a monthly magazine aimed at DSS owners ($52 a year; 800 285-5454). One drawback: As with larger C-band systems, most viewers will have to rely on a regular television antenna or cable operator to be able to watch local stations.

The Primestar approach may be a better choice for folks who don't want to fork over a lot of money for equipment. Primestar is backed by TCI, Time Warner, and other cable industry heavyweights and is following the cable model: Consumers lease the equipment from local providers. The basic monthly package of $25 to $35 covers more than 30 channels, including two from Disney, plus the hardware. Primestar says it will more than double the channel lineup by midyear. The venture claims 70,000 subscribers, and Primestar is currently converting analog equipment to digital. Measuring about three feet across, Primestar's dishes are not as inconspicuous as the DSS dish.

SCOOP SCOUTS. C-band satellite remains the system of choice for those who have the money and space for a big-dish setup. The gear, which includes a dish typically measuring around 7½ feet and an integrated receiver-decoder (IRD) to unscramble the signal, commands about $2,500, with installation. Some 350 channels are available to C-banders, about 75 that are unscrambled and free. These include "wild feeds," transmissions that aren't meant for home viewing. News hounds can catch Ted Koppel between takes or watch 24-hour network affiliate feeds during a disaster.

Sports fanatics may also crave a C-band system. A mindboggling number of college events are available for the taking. Beginning this season, however, the National Football League will start scrambling signals on all its games. Owners of home dishes can subscribe to every contest on Sunday afternoons that is not blacked out locally for $99 prior to Aug. 15 or $139 thereafter. The hardest part may be figuring out how to catch all those games at once. *Edward Baig*

The National Organization on Disabili and Business Week Salute Members of the Disability 2000-CEO Council

The CEO Council was established by the National Organization on Disability (N.O.D.) in 1990 to expand the employment of people with disabilities.

Through their annual contributions, CEO Council members support N.O.D.'s important efforts to increase the participation of people with disabilities in the workplace and in all aspects of life.

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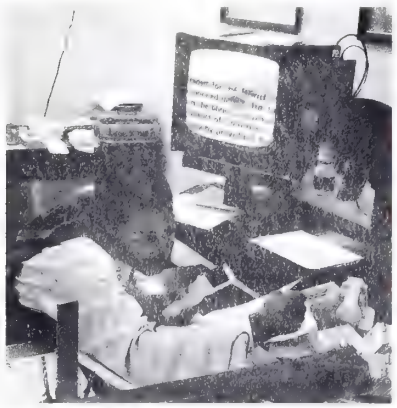

Rick Reinhard

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Chemical Banking Corporation, John F. McGillicuddy
Chevron Corporation, Kenneth T. Derr
Chrysler Corporation, R. J. Eaton
CIGNA Group Insurance, John K. Leonard
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Grow Group, Inc., Russell Banks
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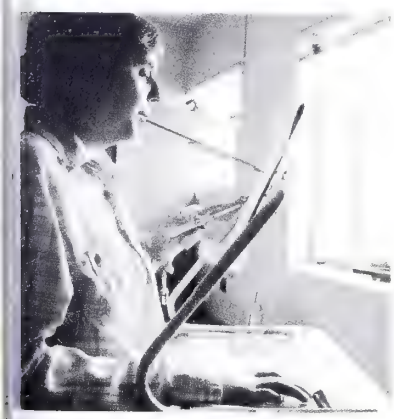

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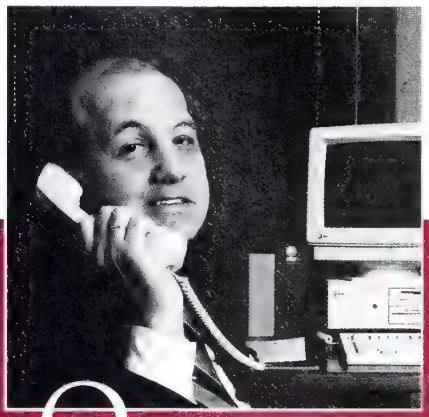

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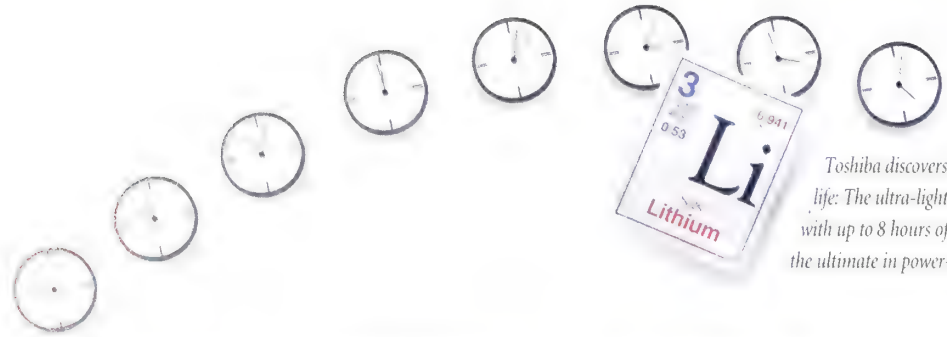

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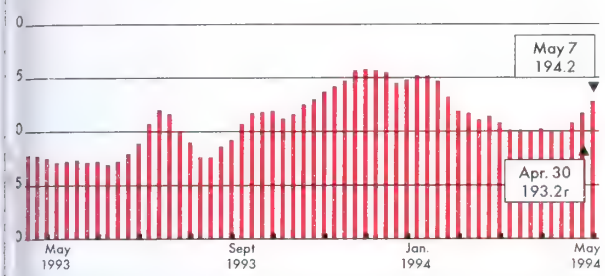
usiness Week Index

ODUCTION

ge from last week: 0.5%
ge from last year: 3.7%

1967=100 (four-week moving average)

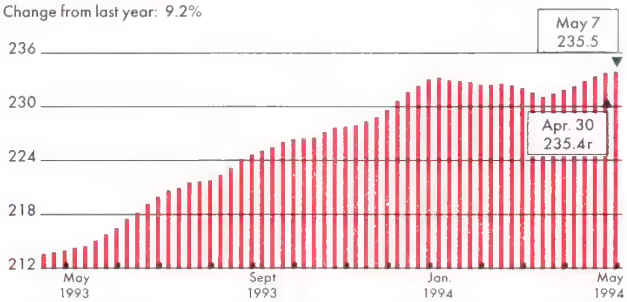


production index increased during the week ended May 7, reflecting the gth of earlier weeks. On a seasonally adjusted basis, output levels of autos, , electric power, coal, and lumber and rail-freight traffic declined, while paper crude-oil refining production increased. Paperboard and truck output was anged from the previous week. Before calculation of the four-week moving ge, the index dipped to 194, from a revised 194.7.

BW production index copyright 1994 by McGraw-Hill Inc

LEADING

Change from last week: 0%
Change from last year: 9.2%



The leading index moved little during the week ended May 7. Sharply higher bond yields and slower growth in the M2 money supply offset the positive signs from faster growth rates for materials prices and real estate loans. Stock prices were unchanged for the week, and data for large-business failures were unavailable. Before calculation of the four-week moving average, the index rose to 235.6, from 234 in the previous week.

Leading index copyright 1994 by Center for International Business Cycle Research

ODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
(5/14) thous. of net tons	1,918	1,921#	5.6
S (5/14) units	146,453	145,190r#	12.0
KS (5/14) units	121,897	122,170r#	15.9
RIC POWER (5/14) millions of kilowatt-hours	54,737	53,694#	1.4
E-OIL REFINING (5/14) thous. of bbl./day	14,279	14,282#	4.9
(5/7) thous. of net tons	19,805#	19,945	8.1
BOARD (5/7) thous. of tons	852.0#	865.8r	5.1
(5/7) thous. of tons	804.0#	808.0r	5.2
ER (5/7) millions of ft.	434.4#	445.8	–7.3
FREIGHT (5/7) billions of ton-miles	22.7#	23.0	6.1

es: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, can Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association erican Railroads

REIGN EXCHANGE

	Latest week	Week ago	Year ago
NESE YEN (5/18)	104	104	110
IAN MARK (5/18)	1.66	1.68	1.62
SH POUND (5/18)	1.51	1.49	1.55
CH FRANC (5/18)	5.68	5.74	5.47
DIAN DOLLAR (5/18)	1.38	1.38	1.27
S FRANC (5/18)	1.41	1.43	1.47
CAN PESO (5/18)[3]	3.325	3.320	3.107

es: Major New York banks. Currencies expressed in units per U.S. dollar, except for British expressed in dollars

ICES

	Latest week	Week ago	% Change year ago
(5/18) $/troy oz.	379.600	380.500	–0.6
SCRAP (5/17) #1 heavy, $/ton	126.00	128.50	18.3
STUFFS (5/16) index, 1967=100	218.8	216.2	6.1
ER (5/14) ¢/lb.	102.6	97.1	17.5
INUM (5/14) ¢/lb.	63.0	63.0	20.0
AT (5/14) #2 hard, $/bu.	3.67	3.76	5.2
ON (5/14) strict low middling 1-1/16 in., ¢/lb.	77.60	80.24	32.9

es: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (5/13) S&P 500	443.54	451.39	0.3
CORPORATE BOND YIELD, Aaa (5/13)	8.12%	7.97%	9.6
INDUSTRIAL MATERIALS PRICES (5/13)	100.6	99.4	4.5
BUSINESS FAILURES (5/6)	NA	NA	NA
REAL ESTATE LOANS (5/4) billions	$423.8	$421.1r	4.3
MONEY SUPPLY, M2 (5/2) billions	$3,546.8	$3,548.1r	2.7
INITIAL CLAIMS, UNEMPLOYMENT (4/30) thous.	352	333	2.9

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
INDUSTRIAL PRODUCTION (Apr.) total index	116.0	115.7r	5.0
CAPACITY UTILIZATION (Apr.)	83.6%	83.6%r	2.7
CONSUMER PRICE INDEX (Apr.)	147.4	147.2	2.4
HOUSING STARTS (Apr.) annual rate, thous.	1,455	1,492	18.1

Sources: Federal Reserve, BLS, Commerce Dept

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (5/2)	$1,138.7	$1,136.4r	8.0
BANKS' BUSINESS LOANS (5/4)	293.9	290.3r	5.1
FREE RESERVES (5/11)	558	1,339r	–18.8
NONFINANCIAL COMMERCIAL PAPER (5/4)	158.4	154.8	–2.2

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (5/17)	4.27%	3.58%	3.01%
PRIME (5/18)	7.25	6.75	6.00
COMMERCIAL PAPER 3-MONTH (5/17)	4.68	4.73	3.15
CERTIFICATES OF DEPOSIT 3-MONTH (5/18)	4.50	4.65	3.12
EURODOLLAR 3-MONTH (5/13)	4.71	4.33	3.08

Sources: Federal Reserve, First Boston

data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
stern Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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nvestment Figures of the Week

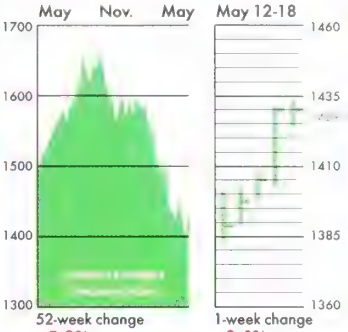
MENTARY

n the Fed talks, the market lis- That was eminently clear as and stock markets reacted fa- ly to the Fed's long-awaited ion on May 17 to boost the al funds rate by a half point. prices soared, and the stock et was similarly buoyant, par- rly among large-cap equities. ow Jones industrial average d 49 points, and the yield on ar Treasuries fell to 7.26% 7.44%. The Fed's inflation- ng move continued to propel s on May 18.

STOCKS

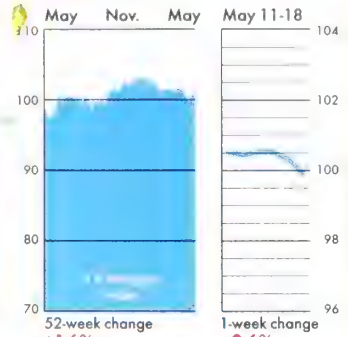
52-week change +1.4%
1-week change +2.8%

BONDS



52-week change −5.0%
1-week change +3.4%

THE DOLLAR



52-week change +1.6%
1-week change −0.6%

ARKET ANALYSIS

STOCKS	Latest	% change Week	52-week
JONES INDUSTRIALS	3732.9	2.9	6.7
IZE COMPANIES (S&P MidCap Index)	169.5	1.8	3.3
L COMPANIES (Russell 2000)	246.8	0.5	7.6
OMPANIES (Russell 3000)	260.9	2.5	1.9

EIGN STOCKS	Latest	% change (local currency) Week	52-week
ION (FINANCIAL TIMES 100)	3116.5	−0.4	10.5
O (NIKKEI INDEX)	20,152.7	0.0	−1.1
NTO (TSE COMPOSITE)	4278.0	2.6	12.2

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.28%	4.32%	3.03%
30-YEAR TREASURY BOND YIELD	7.28%	7.61%	6.97%
S&P 500 DIVIDEND YIELD	2.87%	2.98%	2.83%
S&P 500 PRICE/EARNINGS RATIO	20.0	19.5	22.6

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	462.5	463.2	Negative
Stocks above 26-week moving average	27.6%	28.8%	Neutral
Speculative sentiment: Put/call ratio	0.51	0.43	Positive
Insider sentiment: Vickers sell/buy ratio	1.53	1.55	Positive

DUSTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

R-WEEK LEADERS	% change 4-week	52-week	Strongest stock in group	% change 4-week	52-week	Price
ISURE TIME	14.5	36.8	OUTBOARD MARINE	19.6	12.7	22 1/8
RUGS	14.2	−6.7	SYNTEX	81.6	23.8	23 3/8
ETALS	12.6	26.2	INCO	17.6	15.0	25 7/8
EDICAL PRODUCTS AND SUPPLIES	8.4	−8.9	BAXTER INTERNATIONAL	13.0	−10.3	26
NG-DISTANCE TELECOMMUNICATIONS	8.3	0.6	MCI COMMUNICATIONS	8.9	−2.1	23 19/16
R-WEEK LAGGARDS	**% change 4-week**	**52-week**	**Weakest stock in group**	**% change 4-week**	**52-week**	**Price**
ECIALTY CHEMICALS	−12.6	−13.5	GREAT LAKES CHEMICAL	−24.6	−32.1	48 3/4
NGINEERING AND CONSTRUCTION	−9.2	22.3	MORRISON KNUDSEN	−21.8	−1.1	21 1/2
ECTRIC POWER	−7.4	−20.0	PACIFIC GAS & ELECTRIC	−15.7	−25.4	24 1/4
EAVY-DUTY TRUCKS	−6.6	5.5	CUMMINS ENGINE	−10.8	−6.9	42 3/8
EEL	−5.5	4.3	BETHLEHEM STEEL	−13.2	−11.6	18 1/8

UTUAL FUNDS

MORNINGSTAR INC

DERS

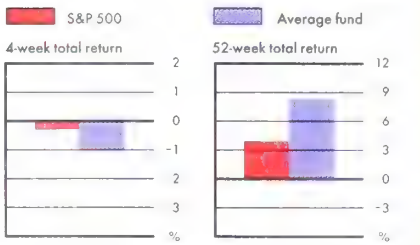
-week total return	%
EXINGTON STRATEGIC INVESTMENTS	12.4
NITED SERVICES GOLD	8.0
IDELITY SELECT HEALTH CARE	7.6

week total return	%
CUDDER LATIN AMERICA	52.8
IONEER INTERNATIONAL GROWTH A	48.3
ERRILL LYNCH LATIN AMERICA A	42.2

LAGGARDS

Four-week total return	%
KEYSTONE AMER. HARTWELL EMERG. GR. B	−8.5
CGM CAPITAL DEVELOPMENT	−7.9
CAPSTONE FUND OF THE SOUTHWEST	−7.8

52-week total return	%
MONITREND GOLD	−36.0
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−23.8
EXCEL VALUE	−22.3



ELATIVE PORTFOLIOS

DRI/McGRAW-HILL

lar amounts resent the present ue of $10,000 ested one year ago ach portfolio

centages indicate -day total returns

Foreign stocks	U.S. stocks	Treasury bonds	Money market fund	Gold
$12,095	$10,490	$10,352	$10,202	$10,017
+1.08%	+0.75%	+2.41%	+0.04%	+0.63%

lata on this page are as of market close Wednesday, May 18, 1994, unless otherwise indicated stry groups include S&P 500 companies only; performance and share prices are as of market close

May 17. Mutual fund returns are as of May 13. Relative portfolios are valued as of May 17. A more detailed explanation of this page is available on request.

LET THE MARKET FIGHT AUTO POLLUTION

In the 1890s, American entrepreneurs made automobiles powered by steam, electric batteries, and the internal-combustion gasoline engine.

Now, a century later, government regulators are giving electric vehicles (EVs) another chance to best gasoline. The reason is that EVs don't produce tailpipe emissions. The California Air Resources Board is mandating that 2% of sales in the state by each of the major auto makers be electric vehicles by 1998, a figure that rises to 10% by 2003. New York and Massachusetts are on similar timetables, and 10 other Eastern states plus the District of Columbia may follow suit.

Opponents and proponents of the rules both have a case to make. The auto industry complains that government is mandating a market for a new, expensive technology that is too inconvenient to attract very many consumers. Shades of synfuel? And environmentalists are right that the societal benefits of cleaner air are clear, and that auto makers typically resist innovation. Remember air bags?

California, with its smog-bound cities, has reason for concern. EVs may be the quickest way for it to meet federal air-quality standards. What makes less sense is for other states to copy California. For instance, the Northeast generates much of its electricity with oil and coal-fired plants, so electric vehicles may not cut smog by much in the region.

Governments shouldn't be picking electric as the best alternative to gasoline. Instead, they should be using their research dollars and buying power to encourage competing technologies that pollute less than traditional gasoline power, and then let the market decide. Government supported research has unleashed a wave of entrepreneurship in the electric-vehicle business. The innovations are not just in EVs, though. Some vehicles use compressed natural gas, and researchers are testing fuel cells, which consume hydrogen without combusting it. Restricting innovation is a mistake.

Regulators and lawmakers are also mistaken in pointing fingers at the auto industry and demanding it take care of the environment. Regulators need to think about what mix of economic incentives would encourage consumers to see it in their self-interest to get old internal-combustion engines off the road and to use EVs or other alternatives. If government misplays its mandate hand, the electric-vehicle effort could join synfuels in the pantheon of industrial policy blunders.

EXECUTIVE PAY: WHO GETS SHORTCHANGED

Shareholder wealth creation—the phrase has become the mantra of modern management. In recent years, activist fund managers and independent directors have placed more focus than ever on market value, and boards have been revamping executive-pay plans to reward a r stock price.

Sometimes, however, corporate performance isn't dir related to a company's market valuation. Consider ITT C where some analysts and former executives suggest Executive Rand V. Araskog is pursuing a strategy th aimed more at boosting its stock rather than engineeri real turnaround in his company's operating results.

For years, consultants have been debating on how to link performance and pay. The nearly universal answer been stock options, since they have value only when stock rises. Trouble is, such incentives can encourage s executives to adopt short-term strategies. You know drill: slash research and development, postpone badly n ed investments, and eliminate employees. The stock sh up, at least in the short-term.

While corporate governance has improved, corpo boards need to balance the interests of shareholders with company's other stakeholders. Executive pay plans tha ward chief executives only on the basis of their stock p aren't the answer. Boards need to come up with plans reward executives for improving customer satisfaction hancing product quality, and achieving long-term, not s term, earnings growth.

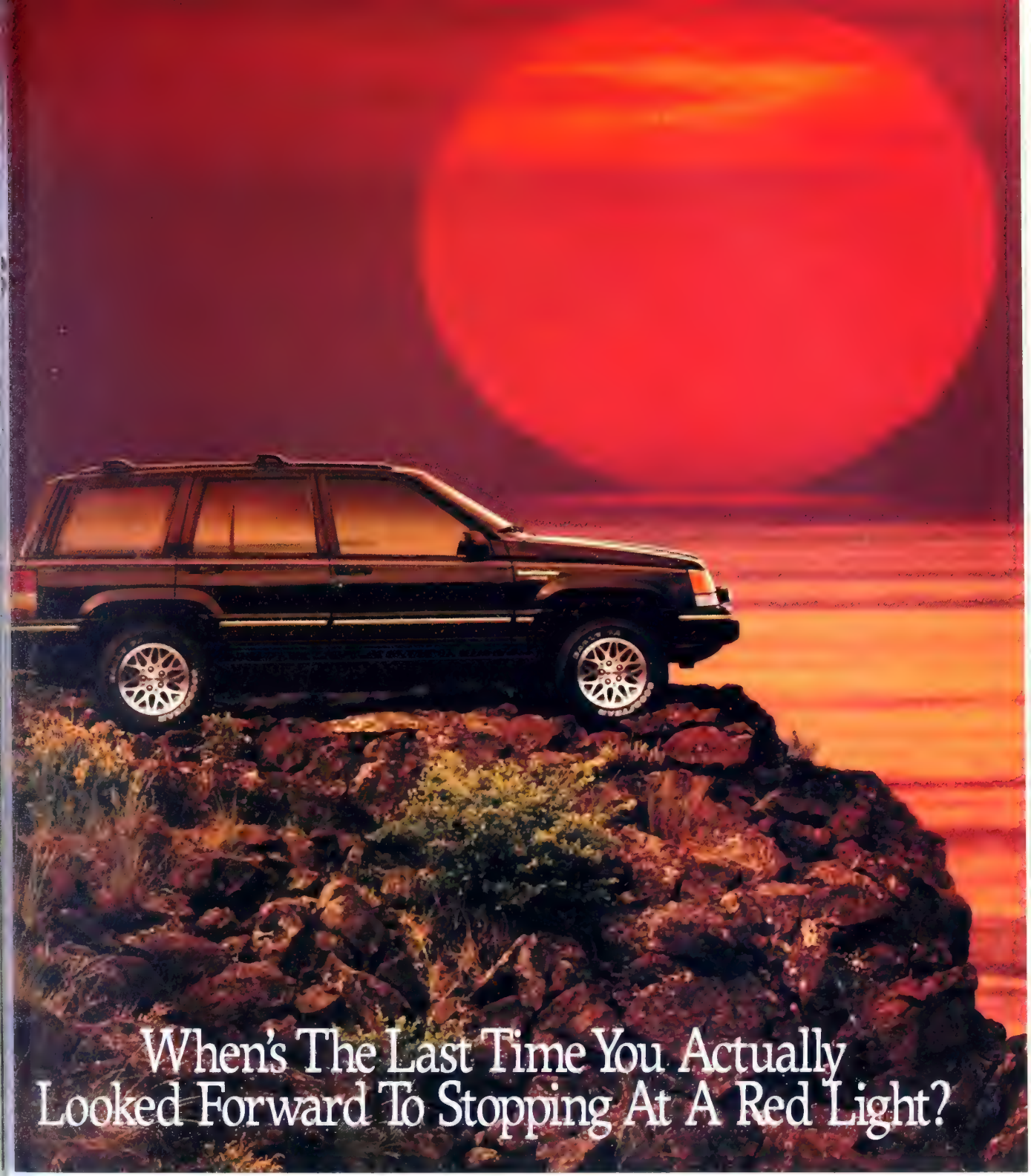
NO SPECIAL FAVORS FOR CABLE OR PHONES

It's ironic. The cable-television industry was early in ognizing the coming convergence of media, compu and telecommunications. Yet now, the industry fear role in the much-ballyhooed Information Superhighwa shrinking. The problem is that the federal governm slashed some $3 billion in cable cash flow by cutting rate 17% just as cable companies were beefing up capital-sper plans. At the same time, the cash-rich Baby Bells are g ahead with their aggressive plans to upgrade their works for video services.

The cable industry is turning to Congress to slow d new competition from the phone companies. The lobbyi lawmakers to deflect competition has a venerable history. lawmakers should ignore cable's pleas for special pr tion, along with similar bids for special favors by the B Bells. The federal government rule book should encou free competition.

One model may be the initial approval by New Y state regulators of opening up Rochester to telephone an ble competition. Rochester Telephone Corp. gets incre profit-making freedom in exchange for allowing outsi to offer local telephone services.

In every era, a key group of industries or critical te nology sets the pace for the economy. It was the railroad the second half of the 1800s and electricity around the of the century. Today, we live in an economy driven by h information revolution. Slowing it down to assuage the fa of any single industry will only damage consumers and h economy.



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BusinessWeek

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CHINA

HOW MUCH CHANGE?

Will a freer economy lead to social and political reform? There are signs that it is starting to happen.

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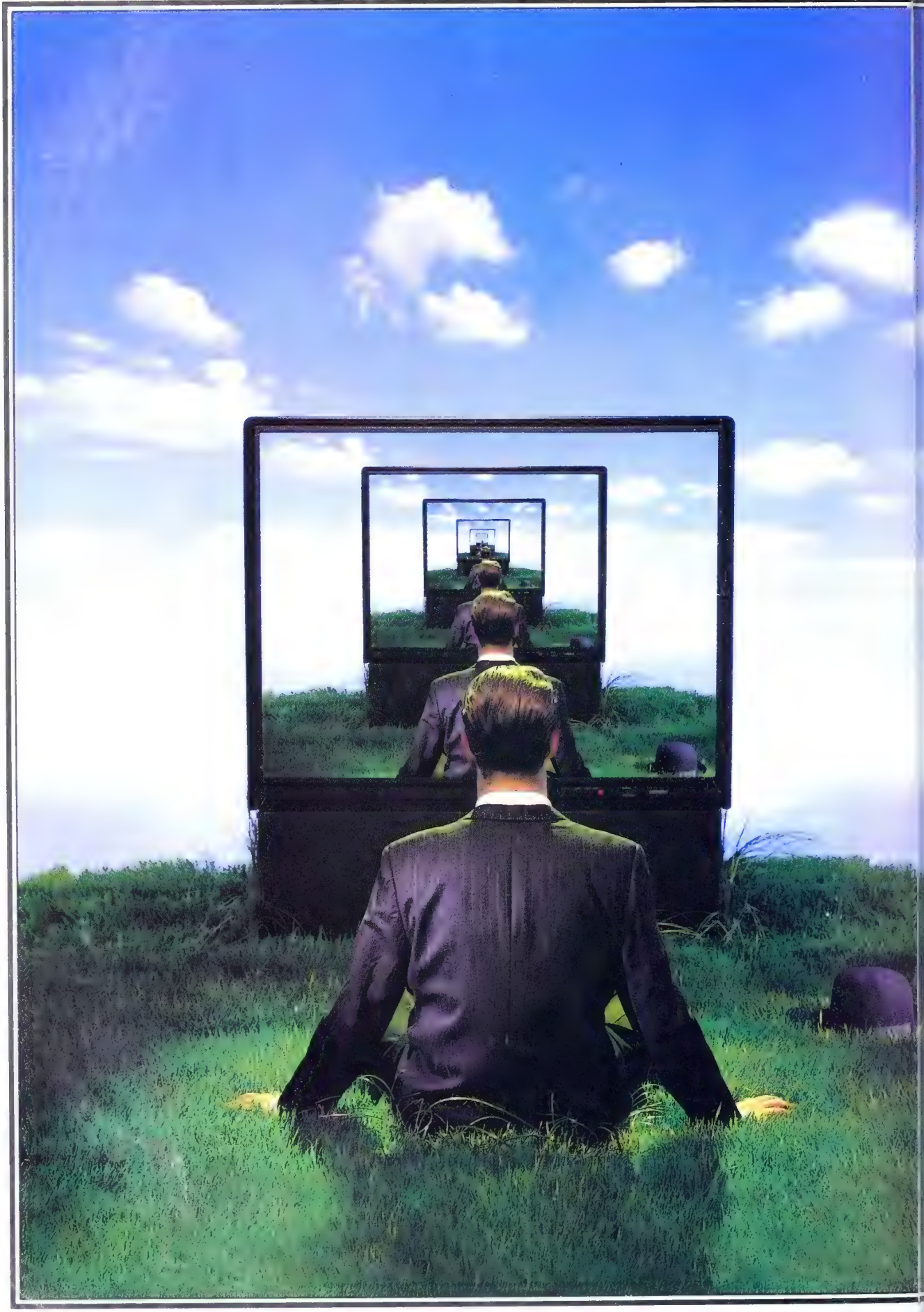

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NUMBER 3375 JUNE 6, 19

THE OPENING DOOR: FAX MACHINES, SATELLITE DISHES, LAWSUITS, WORKER PROTESTS . . . CHINA IS CHANGING FAST

Cover Story

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Five years after Tiananmen Square, the ground is shifting under China's leaders. The old guard can still repress and control, but economic reform is creating a freer society. Now, millions of Chinese can decide where to work and live. People are suing the government to win rights. And the middle class is challenging Beijing in a hundred small ways

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Dale Hanson is leaving CalPERS. Corporate America will notice

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The 1994 Industrial Design Awards pitted pragmatic, "bubba" design against the eye-pleasing work of the "aesthetics police," splitting the jury. Surprises emerged

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Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

TALK SHOW

I'm not here to commiserate over your decline or ev logize at your wake.

—Federal Communications Commission Chairman Reed Hundt a a cable-industry conclave May 24, to critics of FCC rate cuts

ROOMS WITH A VIEW: *Boston's proposed $218 million courthouse*

TAXES AT WORK

JUDGE BREYER'S BEANTOWN PALACE

Supreme Court nominee Stephen Breyer may someday pen monumental decisions. But already he has created a more tangible monument. As chief judge of the U. S. Circuit Court of Appeals in Boston, Breyer was heavily involved in planning a lavish new waterfront courthouse, one of the costliest federal courthouses ever. In four years, the I. M. Pei-designed structure's price has soared 34%, to $218 million, or $285 per square foot—triple the average cost for state and local courthouses. Construction is to start this winter.

BREYER: *A project fan*

The judges will benefit from 37 libraries and 33 kitchens. Plus, the courthouse has a six-story atrium, a $450,000 boat dock on Boston Harbor, and $789,000 in artwork. Representative John Duncan (R-Tenn.) gripes that this doesn't show "high regard for the taxpayer." With his nomination pending, Breyer isn't talking to the press. *Dean Foust*

WHEELER-DEALERS

HOW A SHEEPSKIN 'FELL THROUGH THE CRACKS'

Joseph Jett, fired this spring from Kidder Peabody for allegedly racking up $350 million in fake trades, fulfilled all of the requirements for his Harvard MBA in 1987 but didn't get it. Why? Jett didn't pay a small balance on his tuition bill, says his lawyer, Kenneth Warner.

Warner says the former trader couldn't pay in 1987 because he lacked the funds to make up for a fellowship that unexpectedly fell through—for reasons having nothing to do with him. But he has since paid up, says Warner, and "the diploma will be forthcoming." Why didn't he do this when he started making big money? The matter fell "through the crac says Warner.

Harvard confirms that fulfilled all of his acade requirements but won't c ment on why Jett di graduate, deferring to fe al laws protecting stude privacy. *Leah Nathans S*

JETT: *Square with Harvard?*

NUMBERS GAME

WHERE JANUARY IS THE CRUELEST MONTH

Kurzweil Applied Intelligence knows how to push the limits of voice-recognition technology—and accounting rules. On May 23, the high-tech pioneer announced that four top executives were leaving because of accounting irregularities. But that's not the first questionable incident.

In early 1993, the Waltham (Mass.) outfit faced a big snag in its plan to go public: lousy 1992 earnings. Kurzweil simply moved its fiscal yearend forward by a month, shifting January, 1992—and $1 million in red ink—from '92 to '91. Result: It eked out a $154,000 profit on revenues of $13.9 million for fiscal year '92, ended Jan. 31, 1993. In August,

1993, investors p $10 per share; stock is now tra at around 5. company and its countants w comment.

Another cur twist: Kurz claimed in its stock prospe that a patent fight with Dragon Systems was unli to result in any material Yet just a month after stock sale, Kurzweil set paying Dragon $5.2 mil over six years—clearly a p ful amount for tiny Kurz

In the May 23 annou ment, the company said it discovered transactions "u do not appear to have b bona fide." It won't elabor but one insider says the b believes the four departed ecs, including co-CEO Ber Bradstreet, agreed to p revenues for contracts t hadn't yet been finalized. ter a three-week internal vestigation, this insider s one of those involved br down and came clean. N of the four could be reac for comment. *Mark Maren*

REALITY CHECK

REGULATORS SAY insurance companies and agents can't talk about or advertise the new "risk-based capital" (RBC) scores. With the early-1990s collapse of several carriers in mind, the National Association of Insurance Commissioners came up with RBC ratings for insurers to gauge how risky their assets and business lines are. Saying RBC should only be a regulatory tool, the NAIC devised the gag rule out of fear consumers would be misled.

IN REALITY, the gag rule is too loose to work. The NAIC, which imposed it to please insurers with less-than-stellar ratings, saw that recently. State Mutual Life Assurance exploited a loophole when a research firm published incorrect RBC data for it. State Mutual issued a news release with the right figure. Also, publicly traded insurers likely must disclose RBC numbers in Securities & Exchange Commission filings. And the NAIC can't stop the media from publishing data. Used in conjunction with other ratings, RBC is helpful to consumers. *Chris Roush*

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Up Front

GREEN MARKETING

THESE RUSTLERS ARE ROPIN' TREES

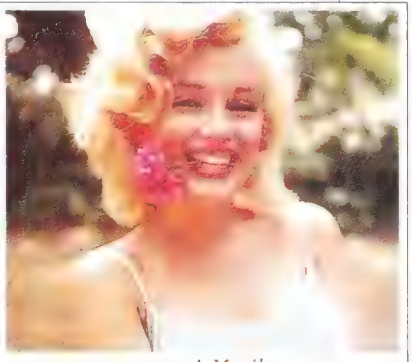
Despite Federal Reserve rate hikes, homebuilders are pretty busy lately. And so are tree poachers. Rising demand for forest products and restrictions on harvests from public lands have caused lumber prices nationally to more than double since their low during the 1991 recession. In one case in Washington state, poachers struck a dozen sites, working mostly at night with muffled chainsaws to steal cedar and other wood prized by the board-hungry building industry. They usually cut only the best parts of the trees, which officials call a "butcher job."

The problem is widespread. In Texas, the nation's No. 9 wood-products provider, they call it timber rustling. Bruce Miles, director of the Texas Forest Service, says the agency has received about 60 timber-theft reports in the past six months, nearly twice the rate of two years ago. One landowner caught three men on his property near the Oklahoma border after they had cut down 152 pine and oak trees, worth some $2,200. They said they had made a mistake and offered to settle. In Washington state, one of the leading lumber sources, authorities are alarmed enough to use the state's organized-crime statutes against suspects accused of poaching wood from state forests. *Wendy Zellner*

PRODUCT PEEK

NOW, COMPUTERS MAY PREFER BLONDES

It's not exactly the Big Screen, but Marilyn Monroe has landed a role in cyberspace. On May 23, Marilyn debuted posthumously among the flying toasters and bungee-jumping cows on computer screen savers. She's shown in both famous and never-before-published shots by renowned MM photographer Sam Shaw. The $30 screen saver, which is put out by SoftImage Publishing, a New York-based software marketer, offers such images as Monroe on the set of *The Seven Year Itch*, lounging at the home of husband-playwright Arthur Miller, and taking the sun in the Hamptons.



SOME LIKE IT HOT: *A Marilyn screen saver could scorch flying toasters*

Bringing pictures of a famous person to the growing $80 million screen-saver market, which has long favored cartoon images, is a novelty. And SoftImage President Robert Kaimowitz concedes that introducing the sex goddess to the workplace may seem like pin-up pandering to base male instincts. But he argues that Monroe is popular among women, too, and that nowadays, she is more legend than cheesecake. "Hey, she's a classic figure," Kaimowitz says. *Ron Stodghill II*

DRAWN AND QUARTERED

MAD AVE.

A UNION FUSILLADE AGAINST 'PRIVATEERS'

New York TV viewers recently saw an ad where suit-wearing executive types hoisted the Jolly Roger. It's part of a media blitz by local government workers to fend off the trend toward privatizing long-time public services, contracting them out to business. The execs in the spot are called "privateers," and the 1.3 million-member American Federation of State, County & Municipal Employees (AFSCME) union is using similar ads in New Hampshire, Arizona, Florida, and Massachusetts.

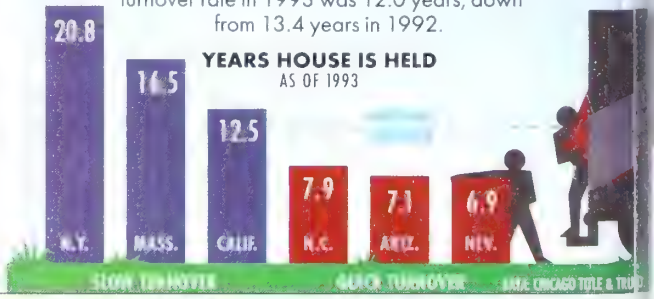
JOLLY ROGER AD: *Public workers defend their turf*

The $1 million New Y radio and TV campaign h lights examples where pri ization allegedly went a One radio ad, for insta claims that a privatized S nectady (N.Y.) sewage-tr ment plant hasn't solved problems and is passing red ink to consumers. spokesperson the contrac Houston-ba Professional vices Gro wouldn't c ment. Th spots are ai in particula plans by G am's mayor, Rudolph Giuli to take residential garb pickup and school custo jobs private. The campa says union spokesman Step Madarasz, is "preventa medicine."

THE BIG PICTURE

KEEP MOVING

Your mortgage may be for 30 years, but you likely won't stay in the house that long. The fastest home turnovers are found in smaller but growing states, which benefit from an influx of big-state people. The national turnover rate in 1993 was 12.0 years, down from 13.4 years in 1992.



COMPLAINTS

Questions and complaints to Better Business Bureaus nationwide in 1993: **14.6 million.** Increase over 1992: **29%**

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Readers Report

WHO'S AFRAID OF ECONOMIC GROWTH?

My compliments on the excellent article "Why are we so afraid of growth?" (Cover Story, May 16). Americans, as a nation, have stopped believing that good things can happen to us. We have entered the most transformative era in our recorded history, and the opportunities are dazzling. But only if we look with new unconventional eyes, divorced of the fear to which we seem to gravitate.

C. Sherman Severin
Graduate Director
Business & Management Dept.
Marylhurst College
Marylhurst, Ore.

Your story is the best treatment I have seen yet of this important topic. I was especially pleased to see the references to [Joseph A.] Schumpeter. I have tried to bring more attention to his thinking in some of my speeches.

One of the unfortunate legacies of post-World War II macroeconomics is that somehow "more people, working smarter, producing more" is assumed to reduce the purchasing power of money. Not everyone on the [Federal Reserve's Open Market Committee] believes that growth causes inflation.

Jerry L. Jordan
President and CEO
Federal Reserve Bank of Cleveland

Editor's note: The writer is a voting member of the Open Market Committee.

The notion of innovation, new technology, and intense global competition spawning a surge in productivity is intuitively appealing and seems consistent with recent data. Nevertheless, your article seems too optimistic in suggesting that the long-term potential growth rate of the U.S. economy may have risen as much as a full percentage point, to 3½% per year.

First, the recent acceleration in productivity growth owes in part to a normal, cyclical rebound from recession-depressed levels. As the economic expansion matures, productivity growth will likely slow from its recent torrid pace.

Second, whatever increase in productivity we are enjoying is also being offset to some degree by a slowdown in the growth of the labor force from the 1980s.

Joshua Feinman, Vice-President
Bankers Trust
New York

CAT'S WORKERS NEED TO BREAK OUT OF OLD PATTERNS

Your portrayal of Caterpillar was colorful but neither accurate nor fair ("Cat is purring, but they're hissing on the floor," Top of the News, May 16).

Caterpillar employees represented by the United Auto Workers (UAW) are receiving earnings and benefits among the best in manufacturing worldwide. The earnings of the average hourly employee totaled $49,000 last year; plus they received first-dollar health coverage, improved pensions, and guaranteed job security through at least September, 1997.

Furthermore, the quality of products built in our UAW-represented plants is at an all-time high, indicative of a workforce that remains committed to excellence and customer service. Finally, in more than two years, UAW leaders have not allowed members to vote on the company's contract offer and have refused to put forth an offer of their own.

The real issue is one that UAW leaders don't like to discuss—their insistence on an outdated "pattern" contract. Because our major competitors are European and Japanese, it makes no sense to tie Caterpillar's contract to a "pattern" set by domestic automobile and farm-implement manufacturers.

Gerald S. Flahert
Group President
Caterpillar Inc.
Peoria, Ill.

REFORM SOCIAL SECURITY —OR SCRAP IT

Your article "Dear Elizabeth: The Fed ate your Social Security" (To the News, May 16) is a good example of adding confusion to what is a sim-

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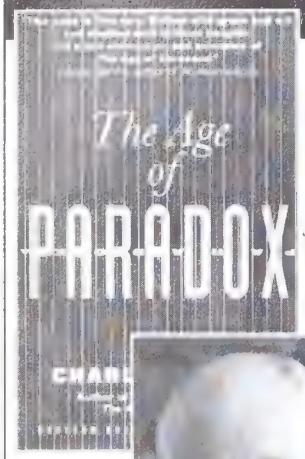

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Readers Report

CORRECTIONS & CLARIFICATIO

In "The best small companies" ta (“Hot Growth Companies,” Cover ry, May 23), the correct teleph number for Pinnacle Micro Inc 800 553-7070. Also, National H Centers Inc. is located in Springd Ark.

problem. The problem is that we allowed Congress to use the fund tended for our retirement to be for current expenditures. The soluti to limit the use of Social Securit just Social Security.

Any private individual with fidu responsibility to a pension or invest fund that has been managed as as the Social Security fund has would already be in jail, and cert not enjoying special privileges Congress.

David Mazzu
Danbury, C

Please tell Elizabeth not to w about the government-sponsored scheme called Social Security. Wh join the powerful old-folks lobby, American Association of Retired sons, in 25 years or so, I will der that payouts be made only to thos need.

And unlike today's 1 million ho holds with $100,000 incomes and that receive monthly Social Secu checks, I will not allow my childre unjustly fund my lavish country retirement.

Mark A. Grim
San Gabriel, C

The solution to the Social Secu dilemma is to give everyone what they've put in and scrap the tem. Any objections?

Alice Moulton
Basking Ridge,

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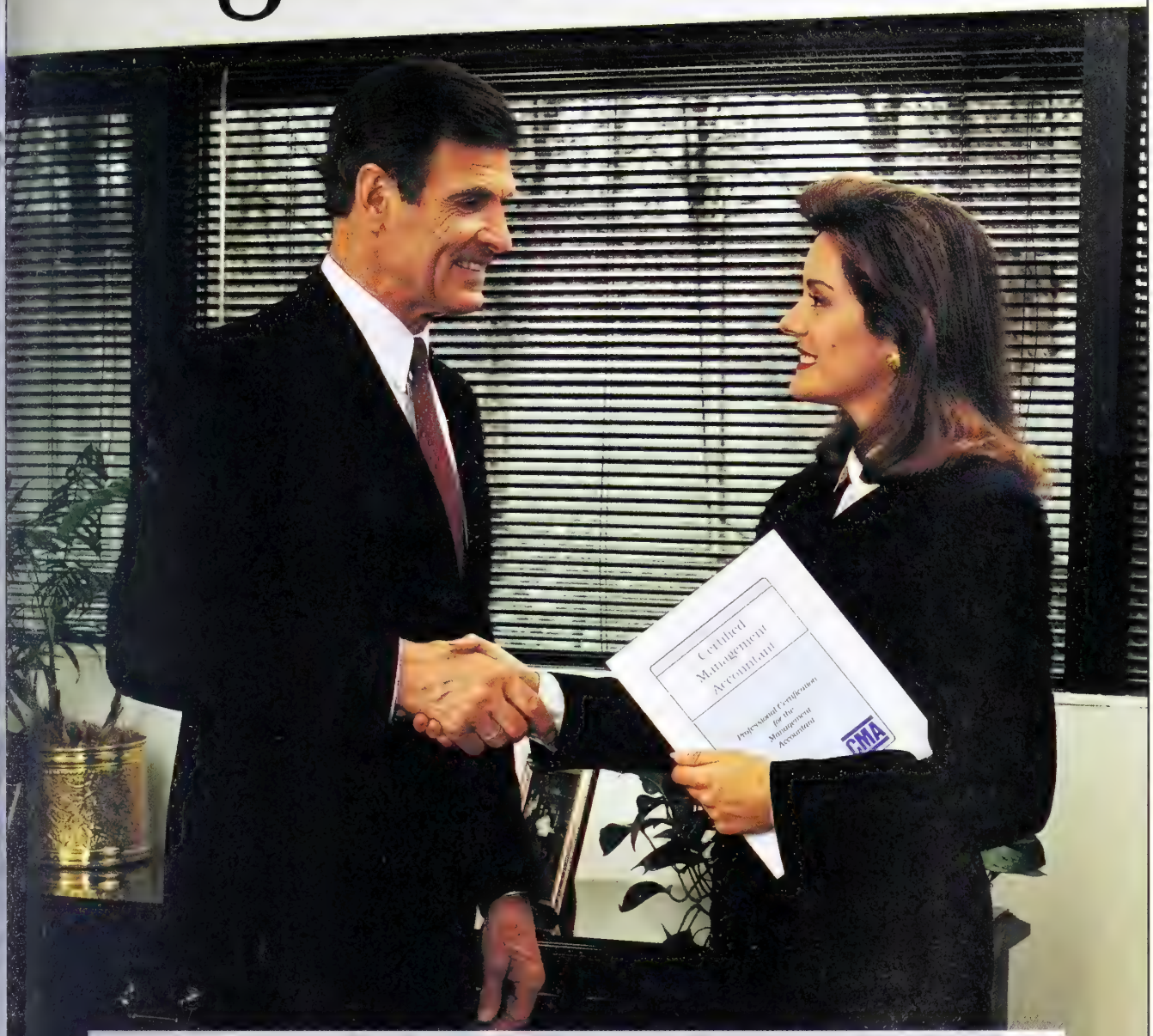

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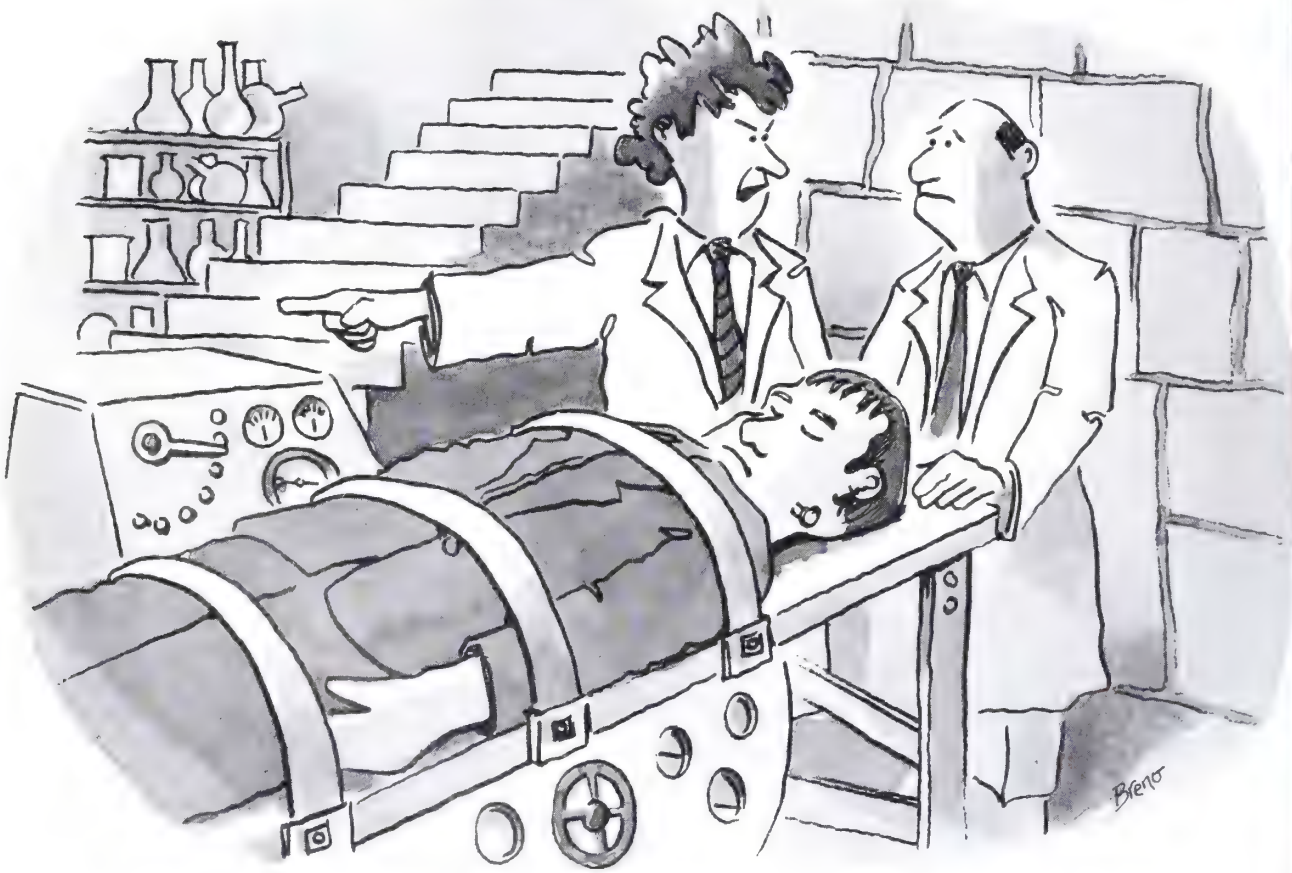

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VARNING: HAZARDOUS 'O THE TOBACCO LOBBY

In the recurring nightmare that makes reporters wake up with the cold sweats, you believe a source ıo has just tipped you off to the Big ory, and then, after you run with it—ıoops. Well, the nightmare came true r poor Nick Naylor.

A Washington television reporter, aylor is on a run-of-the-mill assignment vering the President's trip to a Marine ıse when he overhears Secret Service ents fretting about Rover choking on piece of meat. As Naylor happens to ıow, "Rover" is the President's code ıme. When somebody pronounces Rov- dead, Naylor grimly tells the nation e news, sending the stock market unging 180 points before the White ouse reassures everyone that the Pres- ent is fine. The late Rover, it turns it, was the base commandant's dog.

Nick Naylor is author Christopher Buckley's fictional answer to the question: What kind of person would take on the Sisyphean task of doing public relations for the tobacco industry? Naylor, a smooth, shamed, soul-sapped sell-out, that's who—the star of Buckley's fiendishly funny send-up of Big Tobacco and Washington spin control, *Thank You for Smoking*.

Nick's Rover fiasco, it turns out, was precisely the reason the head of the "Academy of Tobacco Studies," J. J. Hollister ("a man born with tar in his blood") hired him to be the ATS spokesperson. Hollister reassured the tobacco industry's wheezy old generals: "That boy is going to work his *behind* off putting this thing behind him....That boy is going to be one *angry* young man."

Quite a judge of character, that J. J. Sure enough, that embarrassment is the reason Naylor can muster the guts, while seated between a hairless, 15-year-old, former Camel-smoking cancer sufferer and a do-good bureaucrat from the Office of Substance Abuse Prevention, to tell Oprah that the feds wanted the kid to die. Why? "'So that their *budgets*'—he spat out the distasteful word—'will go up. This is nothing less than trafficking in human misery and you, sir, ought to be *ashamed* of yourself.'"

It also explains why Naylor can huddle merrily with the chief spokespeople for the alcohol industry and the gun lobby at weekly "Merchant of Death" luncheons. Sequestered at back tables in low-profile restaurants, Naylor and his "Mod Squad" cronies trade black humor and try out "sound bites de-emphasizing the lethality of their products."

The work poses some interesting challenges. One of Naylor's chums is charged with positioning the massacre of a Texas church choir as evidence of why gun control is dangerous. How so? A parishioner in the front row insists she would have had a clear shot had she been packing her piece. Naylor's other pal, representing the Moderation Council (whose slogan is "strength through unity

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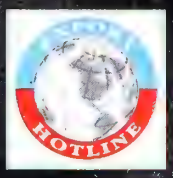

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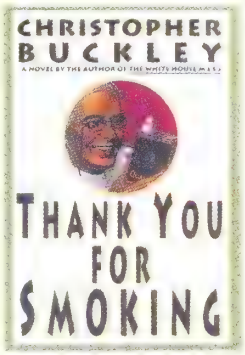
a time of volumetric cline") ponders whether she should try to outmaneuver Diane Sawyer *Prime Time Live* to be st to hug a child with al alcohol syndrome on nera.

These characters earn ir pay. So does Nay-, whom Buckley manes to make likable de-te his cynicism, which thicker than the three-ck-a-day smoke that irls around him.

Buckley, the editor of *rbes FYI*, is a Washing-n insider who knows s turf. His previous, ll-received satire was *e White House Mess*. Even though ne of his one-liners read as though ey were written for Murphy Brown deliver and then wait for the laugh ck, most of his humor is well-ground-in ironies that have tickled tobacco-in-stry watchers for years, beginning th a certain personal problem that ne real-life tobacco lobbyists and em-yees have trouble controlling. For example, the receptionist at ATS, after answering the phone cheerfully, "began to cough. No dainty little throat-clearer, either, but a deep pulmonary bulldozer. 'Academy of—*harrg*—Tobacco—*kuhh*—Studies.' Nick wondered if having a receptionist who couldn't get through 'hello' without a bronchospasm was a plus."

Buckley's satire will have you roaring, but it's painfully close to what's on the news these days



The plot is a farcical romp through the second-biggest event in Nick's life: His kidnapping, allegedly by antismoking advocates who cover his body in enough stop-smoking nicotine patches to kill him. He manages to escape, however, and is found in his boxer shorts, stumbling and wired, by the police. Nick becomes an overnight celebrity and a hero to his benefactors when he miraculously escapes death—in part because of his high tolerance for nicotine. For that, he earns a big salary increase, the laser-beam lust of a sexy co-worker, and the cushy assignment of working out bribes with a big-name Hollywood producer to put cigarettes in the celluloid hands of hot young actors. But it also raises the antennae of the FBI, who wonder: Isn't this the *second* time Nick Naylor has captured the spotlight through unusual circumstances?

An ace satirist, Buckley will have you roaring, but the feeling fades to an edgy sadness. Flip on the nightly news lately

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l there are those tobacco executives uthing the very assertions you ghed at when they came from Buck- 's characters—that the smoking de- e is not about recruiting children to oke, it's about an assault on American il liberties; that cigarettes aren't ad- tive, they're just a pleasurable habit, e sweets or coffee. However broad comedy in *Thank You for Smoking* omes, it often feels as though only names have been changed. This book also a broadside at the purse-lipped itically correct. But its cut-the-bull nor stands a better chance of making ir points than product labeling or f-righteous rhetoric ever will.

The only thing funnier to be said this ir about smoking could well be what- r reaction the tobacco industry will ve to this book. Imagine the Tobacco titute press release denouncing it— h Nick Naylor's logic-suspending in- nation propelling every line. A pos- le correlation between reading satire l blindness, perhaps? Better yet, ke it wrinkles. Laugh lines could be a problem here.

BY JOAN O'C. HAMILTON

Correspondent Hamilton has covered smoking debate from San Francisco.

BOOK BRIEFS

THE PRU-BACHE MURDER
By Jeffrey Taylor
Harper Collins • 293pp • $23

ROGUE BROKER

The movie *Wall Street* is a cult classic among brokers for its dead-on portrayal of a brokerage firm in the roaring Eighties, peopled with avaricious hustlers, greedy customers, and invisible managers. *The Pru-Bache Murder: The Fast Life and Grisly Death of a Millionaire Stockbroker* describes a similar, but real-life milieu. *Wall Street Journal* reporter Jeffrey Taylor chronicles the life of Russian émigré Michael Prozumenshikov, who went from janitor to top broker generating huge commissions. After years of fleecing customers, he was killed by an enraged client, who hacked up his body and strewed the parts in a snow bank near Minneapolis.

Taylor tries to provide insight into Prozumenshikov by documenting—with pages of excessive detail—his lust for Rolexes and Mercedes, his workaholism, and life in the Russian émigré community. He's more successful at exposing the scams, which included loading up clients' IRAs with speculative stocks, churning stocks until a customer's accountant catches on, and leveraging clients' accounts by buying on margin.

What's most striking is how easily Prozumenshikov got away with it. He thrived at three major firms—Merrill Lynch, Drexel Burnham Lambert, and Prudential-Bache, now Prudential Securities. His supervisors were remarkably ineffective in stopping him from essentially stealing from his customers. Indeed, his high profits were rewarded. He regularly attended lavish sales conferences and got huge up-front hiring bonuses each time he moved.

While the Securities & Exchange Commission is now cracking down on so-called rogue brokers, *The Pru-Bache Murder* shows that rogues are anything but outsiders. They are created by the system, through very specific incentives.

Styling the book as a thriller makes Taylor too sympathetic to the murdered broker and insufficiently analytical about how he prospered so long. Still, many denizens and clients of Wall Street will appreciate this sordid tale of revenge.

BY LEAH NATHANS SPIRO

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THE NATURAL RATE OF INFLATION ISN'T CARVED IN STONE

BY ROBERT KUTTNER

The level at which new hiring sparks inflation keeps changing—so it's perfectly feasible for the right policies to nudge the rate downward from the 6% evidently accepted by the Fed

In the debate about the Fed's recent rate hikes, we have heard a great deal about the "natural rate of unemployment." The concept, coined by economist Milton Friedman in 1968, is that there is a normal amount of unemployment; if the government tries through fiscal or monetary policy to reduce joblessness below its "natural" or equilibrium rate, the economy will just pay a price in inflation. That in turn will reduce investment and thus create higher unemployment later on. This claim is a variant on the usual mantra of Chicago-school economics: The economy is doing the best it can, so leave well enough alone.

The Federal Reserve has evidently concluded that the natural rate is something in excess of 6%. The Fed has raised interest rates four times during the past four months, on the premise that too much job creation would be inflationary. But there are two separate fallacies at work here, needlessly denying the economy job creation and growth.

First, as this column has argued (Apr. 11) and as BUSINESS WEEK explained in a cover story (May 16), there is a good deal of evidence the Fed is battling ghosts. At the present rates of growth and job creation, inflationary pressures are virtually flat. On the eve of the most recent rate hike, on May 17, the Labor Dept. reported that consumer prices in April increased just 0.1% and that the core inflation rate, which excludes food and energy prices (on grounds of volatility), actually fell.

MOVABLE BEAST. Second, the "natural rate of unemployment," if it exists at all, is anything but stable. It varies over time and place as a result of public policies as well as shifts in the private economy. As I have suggested, the erosion of labor's bargaining power, coupled with increased global competition and technological innovation, means the economy can run closer to full employment without courting wage or price increases.

Columbia University's Edmund S. Phelps examines unemployment by year and by country for 1955 to 1990 in his recent, influential book, *Structural Slumps*. His finding: "The equilibrium path of the unemployment rate always approaches the natural rate, as before. But something has been added. The natural rate moves!"

Most noneconomists, of course, would not find that a startling insight. Phelps aptly suggests that some policies, such as excessive payroll taxes, can raise the cost of taking on new labor and thus push the natural rate up. Other policies, such as wage subsidies, can push it down. Structural characteristics of the economy that Phelps doesn't emphasize, such as the degree of price competition, the sta technology, and the strength and strateg unions, can also affect the point at which creation begins to stimulate inflation. For ample, unions in Scandinavia, though stronger than those in the U. S., have had a policy of limiting wage hikes to productivity increases. They pursue this seemingly anomalous strategy in order to down inflation and thus to allow the econ to run closer to full employment.

CUTS BOTH WAYS. Recent structural shift the natural rate of unemployment have simultaneously in opposite directions. In rope, where unions, minimum wages, and cial supports remain strong and payroll ta are high, few new jobs have been genera In the U. S., where payroll taxes are small seems likely that the natural rate is lo than Europe's to begin with. Moreover, U. S. natural rate has fallen because labor gaining power is much weaker, and, thank new technology and sources of supply, t are ample opportunities for customers to r price increases.

Some economists nonetheless point to of ting trends that have pushed the natural upward, even in the U. S. For example, University of Chicago's Robert H. Topel Harvard University's Martin S. Feldstein tend that the persistence of structural un ployment leads to a higher de facto natura employment rate. After a while, low-sil hard-to-employ people become effectively employable, no matter how fast the econ grows. To stimulate the whole econom the point where the least attractive 5% "hireable," one must arguably overstimu the rest of the economy.

This insight, although accurate as far goes, is the economic equivalent of shoon the economy's wounded. If, as Phelps fi the natural rate of unemployment moves, sensible policies can move it. Job-training icies can push the natural rate still lo both by making the structurally unemplo into more attractive job candidates as we by eliminating wage pressures that result spot shortages of highly skilled work Changing the rules on overtime would to new hires rather than longer work we Labor Secretary Robert B. Reich says: "W ever the so-called natural rate of unemp ment, given the structures we inherited, Administration is determined to push it do

A worthy goal, that. Despite Friedman the Fed, the "natural" rate of unemployme anything but natural. And enlightened pu policy is anything but helpless.

ROBERT KUTTNER IS CO-EDITOR OF *THE AMERICAN PROSPECT* AND AUTHOR OF *THE END OF LAISSEZ-FAIRE*

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BY GENE KORETZ

AN UNCERTAIN DOLLAR IS TURNING EYES TO JAPAN AND GERMANY

Is the dollar a prisoner of potentially damaging speculative excesses on foreign exchange markets? That's certainly a popular view on Wall Street. The financial markets have been spooked by fears that skittish currency traders would continue to push the dollar down against the German mark and the Japanese yen, thereby forcing U.S. bond rates higher and imperiling incipient recoveries overseas. Even the Clinton Administration, which once welcomed dollar weakness as a way to wring trade concessions from the Japanese, has given its blessing to efforts by the Federal Reserve and other central banks to support the dollar in currency markets.

IN MOST OF THE WORLD THE DOLLAR IS STRONG

According to economist Bruce Kasman of Morgan Guaranty Trust Co., the dollar's recent gyrations reflect more than nervous trading activity. What is happening, he says, "is a reassessment of international profit opportunities."

Kasman notes, for example, that the dollar has stayed strong against the currencies of most industrial countries except for Germany and Japan (chart). Given the robustness of the U.S. expansion, such strength is hardly surprising. Many industrial countries plagued by chronic economic woes have suffered currency depreciation against the dollar. And some—such as Britain, Australia, Canada, Norway, and Finland—have been aggressively cutting their interest rates.

Meanwhile, says Kasman, Germany and Japan have maintained far tighter monetary policies than the U.S., pushing inflation down and keeping real short-term interest rates relatively high at a time when comparable inflation-adjusted U.S. rates have been low. And both these nations are now poised for upturns in the face of significant idle capacity, whereas the U.S. expansion is rapidly—"too rapidly," says Kasman—approaching the point at which capacity constraints reignite inflation.

In short, Kasman believes that the message of the currency markets is that rising inflation risks in the U.S. are shifting investor interest toward the prospect of noninflationary profit growth in Japan and Germany. "We think the dollar should strengthen again," he says, "but only if the Fed acts more decisively to keep inflation in check."

ONE MORE REASON THE U.S. TRADE GAP WILL GET WIDER

America's trade deficit fell in March, but it still seems headed higher—if only for cyclical reasons. As long as the U.S. expansion continues and foreign economies remain weak, America's appetite for imports will grow, and demand for its exports will stay depressed.

Economist Edward F. McKelvey of Goldman, Sachs & Co. underscores another element in the trade outlook. He notes that the prices of a broad range of imports have been unusually subdued for years. On average, from 1987 to 1993, import prices have risen 1.5 percentage points less than prices of domestically produced goods and services. In fact, over the past year nonoil import prices have been edging up at a mere 1% annual rate.

These trends, says McKelvey, suggest that rising imports will continue to swell the trade deficit as long as domestic demand remains strong. And bouts of dollar weakness won't affect U.S. inflation until foreign businesses raise prices a lot more aggressively.

FINDING THE HIDDEN MIDDLE CLASS IN DEVELOPING COUNTRIES

Here's a tip for U.S. companies scanning the globe for potential customers: There are far more middle-class consumers in emerging countries in Asia and Latin America than most studies indicate, reports the Futures Group Inc., a consulting firm based in Connecticut.

Rather than relying on dollar exchange rates to gauge income levels overseas, Futures Group analysts use so-called purchasing-power-parity methods developed by economists at the World Bank and the U.N. These methods factor local prices of nontraded goods and services, such as housing, utilities, and health care, into their income measures.

The results are eye-popping. China's per capita income is $400 as measured by exchange rates, but approaches $2,500 on a purchasing-power basis. Similarly, India's per capita income jumps fivefold, to $1,250, while Mexico's tumbles, to $7,000. And whereas fewer than 3 million Chinese are middle class in the sense of earning $10,000 to $40,000 a year when measured by currency exchange rates, their ranks soar to some 80 million when purchasing power is used as the yardstick.

Purchasing-power measures, claims the Futures Group, can help identify large groups of potential customers by casting light on disposable income available for purchases. And that's exactly what U.S. exporters are interested in.

HOW AMERICA'S MOBILITY HURTS POOR CHILDREN

Americans are among the most mobile of people, with about one-fifth moving each year. But while mobility can improve the efficiency of labor markets, it seems particularly high among the poor and disadvantaged. The effect on children can be particularly devastating, according to a recent General Accounting Office study.

The GAO reports that an astonishing 30% of U.S. third-graders from families with annual incomes below $10,000 have changed schools at least three times since entering first grade—as have 19% of third-graders in inner-city schools. That's two and three times the rate among children who attend suburban and rural schools or come from more affluent families.

Such mobility exacerbates the problems faced by disadvantaged children. Among all income groups, frequent school-changers are more likely to perform poorly in reading and math, to repeat a grade, and to have health problems than children who have never changed schools. And, notes the GAO, mobile families and their children are among the least likely to take advantage of government programs aimed at improving educational success.

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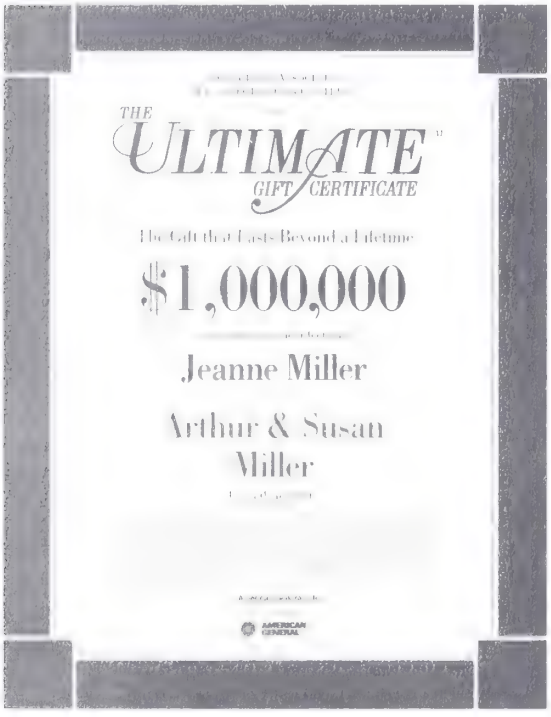

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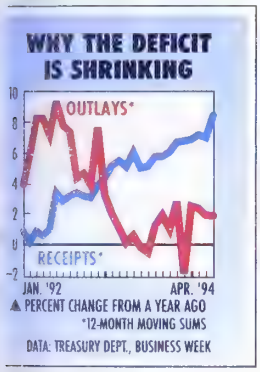
JNE 6, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

THE ECONOMY CAN'T COUNT ON HELP FROM WASHINGTON—OR THE DOLLAR

If the Federal Reserve has truly shifted monetary policy into neutral, then the U. S. economy finds itself in an unfamiliar position. For the first time since 1989, he net thrust from Washington's two main policy levers is ow contractionary: The central bank is neither stimulative nor restrictive, and the shrinking federal deficit eans that fiscal policy is a drag.

This shift is a big reason why the economy is far from verheating. In fact, it suggests that the peak growth ate in this expansion is near, as the economy must move orward on its own momentum. This doesn't mean that recession is just around the corner—it isn't. But it does uggest that growth in 1995 could be a notch below 1994's.



The deficit declines since 1992 have been impressive. With the key April data now in hand, the budget gap for fiscal 1994—ending in September—is on track to dip perhaps as low as $205 billion, led by an acceleration in receipts and slow growth in outlays (chart). The Treasury posted a $17.5 billion surplus in April, twice last April's level, mainly reflecting the tax hike on high-income individuals. Outlays were no higher than they were a year ago.

If that projection is on the mark, the deficit would be down from $254.7 billion in 1993, and from $290.7 billion in 1992. It would also be lower than the Clinton Administration's forecast of $220 billion to $230 billion. The White House sees a further drop in 1995, to $165 billion.

THE FED WILL COOL ITS HEELS FOR NOW

The trouble is, the loss of fiscal stimulus in 1993 was offset by the economic boost from lower long-term interest rates, as a result of the bond market's euphoria over the Administration's resolve to cut the deficit. Now, partly because of the Fed's recent hikes in short-term interest rates, long-term rates are back up sharply, and the shrinking deficit's drain on growth has not subsided.

Moreover, while the central bank seems satisfied to sit back for a while and see what one of its steepest four-month rate hikes in the postwar period has wrought, it appears to have left the door open for another hike or two later on this year, if needed.

Will it slip another one through the crack? Two arguments say no. One, the real federal-funds rate, adjusted for inflation, now is near its long-run average, a proxy for neutral policy. And two, the growth of bank reserves, the fuel for money and credit, has fallen to zero during the past four months, a sign that Fed tightening is achieving its desired results.

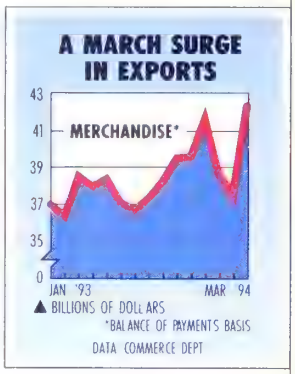
Still, one argument says yes: The dollar failed to rally following the Fed's May 17 hikes, and another round of dollar weakness by itself could raise fears of import-led inflation. The sagging greenback appears to be rooted in the deteriorating U. S. trade deficit, which means the dollar could remain vulnerable for some time.

That would further cripple the bond and stock markets—and thus force the Fed's hand. Indeed, in an unusually bold statement for a Fed governor, Lawrence B. Lindsey said on May 25, "One cannot imagine New York retaining its role as the world financial capital if the dollar did not retain its leading role as a world currency."

FACTORY ORDERS LOSE SOME STEAM

But even without further tightening, the economy will feel the impact of higher rates. During the past year, interest-sensitive sectors of the economy—including consumer durables, housing, and business equipment—have accounted for 80% of the economy's growth. The pace of those sectors will slow noticeably in the second half.

That's especially true for housing and consumer durables. Although they make up only 14% of gross domestic product, they have contributed 40% of the economy's growth from a year ago. Already, fixed mortgage rates have hit 8.65%, home-purchase mortgage applications have fallen to the lowest level of the year, and refinancing requests are off sharply.



Durable-goods makers are seeing some slowdown in demand. New orders were up just 0.1% in April—and all the strength was in defense ordering. Bookings for transportation equipment fell for the third consecutive month, as a result of car and truck demand beginning to taper off.

So with domestic demand facing constraints, exports loom increasingly important to the outlook. The March data were encouraging. Shipments of goods bound for overseas surged 12.7% from February, to a record $42.2 billion (chart). Capital goods were especially strong.

That gain outstripped a large 6.5% increase in imports,

allowing the deficit for goods to shrink from $13.5 billion in February to $12 billion. The trade gap for both goods and services narrowed from $9.5 billion to $7.2 billion in March.

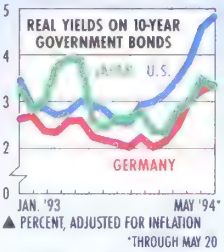
The outlook for exports is good, given improving prospects for the European economies. But recoveries in Germany, France, and elsewhere on the Continent will be slow to develop and not particularly strong upon arrival.

The real problem, though, is that the U. S. continues to import at a faster pace than it exports, and that's likely to remain true well into 1995. In addition, U. S. stocks, bonds, and other assets are not particularly alluring to foreigners now, meaning the country is not attracting the capital needed to finance its overconsumption. As a result, America's current-account balance—including goods, services, and financial flows—is heading deeper into deficit.

THE CURIOUS CASE OF THE DOLLAR

That's a classic recipe for a weak currency—and the foreign-exchange markets have taken notice. The greenback has gone nowhere vs. the German mark over the past four years, and it is down 6.3% against the Japanese yen just during the past year.

A WIDER SPREAD IN INTEREST RATES



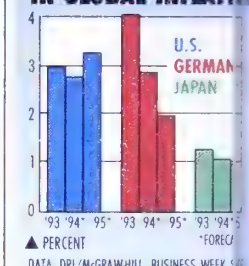
▲ PERCENT, ADJUSTED FOR INFLATION
*THROUGH MAY 20
DATA: DRI/ McGRAW-HILL INC., BUSINESS WEEK

Ironically, better economic growth and higher real rates should be a sure-fire tonic for the dollar, especially against the mark. After all, the U. S. is in its third year of expansion, while Germany is just showing signs of a recovery, and Japan may still be in recession. Plus, after the latest round of European interest-rate cuts and the Fed's rate hike, real interest rates, using 10-year bonds, are much higher in the U. S. (chart).

Certainly, a dollar rally is possible, if not likely, especially with the central banks synchronizing intervention in the currency markets and the recent apparent coordination of monetary policy between the Fed and the German Bundesbank. In addition, trade talks between the U. S. and Japan are set to start up again, and the Clinton Administration has made it clear that the dollar has sunk far enough against the Japanese currency.

But any dollar rally could be short-lived. For one thing, the hefty U. S. current-account deficit with Japan—a big part of Japan's huge surplus with the world—continues to widen. In April, the U. S. merchandise deficit with Japan rose to $5.8 billion, from $4.6 billion in March. All of the increase came from higher imports.

DIVERGENT TRENDS IN GLOBAL INFLATION



DATA: DRI/McGRAW-HILL, BUSINESS WEEK

Historically, the bilateral trade balance between the U. S. and Japan has been far more important in determining currency patterns than growth and rate differentials. So, the deterioration in trade, along with past jawboning by Clinton Administration officials for a stronger yen, suggests that there is little support for a cheaper yen.

In addition, the differing outlooks for inflation hurt the dollar, especially in Europe (chart). Most forecasters expect that U. S. and German inflation rates will converge in 1994. But in 1995, Germany's inflation should continue to decline, as will Japan's, while a mature expansion in the U. S. will start to generate gradual upward pressure on U. S. prices, preventing further improvement.

A weaker dollar would make American goods more attractive in foreign markets, but the costs would be high, including imported inflation, sagging financial markets, and perhaps even tighter Fed policy. At a time when the economy is more dependent than ever on domestic and foreign demand, the U. S. can do without the added burden of a swooning dollar.

THE WEEK AHEAD

PERSONAL INCOME

Tuesday, May 31, 8:30 a.m.
Personal income probably rose 0.5% in April, after a 0.6% gain in March. April consumer spending, however, rose only 0.1%, much slower than March's 0.4% advance. That's the median forecast of economists surveyed by MMS International, a unit of McGraw-Hill Inc. Softer consumer demand is suggested by the 0.8% decline in April retail sales.

NEW SINGLE-FAMILY HOME SALES

Tuesday, May 31, 10 a.m.
New homes are likely to have sold at an annual rate of 725,000 in April, down from a 739,000 pace in March. Higher rates are beginning to take a toll on homebuying.

CONSUMER CONFIDENCE

Tuesday, May 31, 10 a.m.
The Conference Board's index of consumer confidence probably fell slightly, to 91.2 in May, from 91.7 in April.

CONSTRUCTION SPENDING

Wednesday, June 1, 10 a.m.
Construction spending likely rose 1% in April, after growing 0.7% in March.

NAPM SURVEY

Wednesday, June 1, 10 a.m.
The National Association of Purchasing Management's index of business activity in May was probably unchanged from April's solid reading of 57.7%, say MMS economists.

LEADING INDICATORS

Thursday, June 2, 8:30 a.m.
The composite index of leading indicators likely rose just 0.1% in April, after a 0.7% jump in March.

EMPLOYMENT

Friday, June 3, 8:30 a.m.
The MMS consensus is that nonfarm payrolls probably rose by a healthy 275,000 in May, after surging 464,000 in March and 267,000 in April. Nevertheless, the May unemployment rate is forecast to remain at 6.4%.

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DETROIT, CHECK YOUR REARVIEW MIRROR

JAPAN'S NEW MARKETING TACTICS MAY THREATEN THE BIG THREE'S COMEBACK

The exhilaration is palpable around Detroit these days. The auto makers are hiring again, adding shifts, and speeding up production lines to churn out cars that can nearly match Japanese rivals in quality—yet sell for thousands of dollars less. First-quarter profits for the Big Three totaled $2.7 billion, and Chrysler Corp. on May 19 voted a 25% hike in its dividend. With factories running flat out, workers are clocking overtime and executives are counting on fat bonus checks.

But Detroit's much-ballyhooed comeback is masking a little-noticed threat. The Japanese are staging a comeback of their own. In the first four months of the year, sales of Japanese cars and light trucks climbed 16%, enough to reverse a two-year slide in their U.S. market share. So far, Japan has regained more than a point of market share in passenger cars—while General Motors Corp. and Ford Motor Co. shares are off. If their breakneck pace holds up, Japan's carmakers are headed for record sales in the U.S. of more than 3.5 million vehicles this year, says researcher Autofacts Inc.—a quarter-million more than their 1990 peak. "[The Japanese] have been coming back strongly," says Ford Chairman Alexander J. Trotman. "They're not going to change in the foreseeable future except to get tougher and more efficient."

The real showdown looms this fall. Japan's current gains may prove to be only temporary if key new 1995 models from Detroit—which has been hampered by model changeovers—take off: Ford will replace its aging Tempo and Mercury Topaz with the new Ford Contour and Mercury Mystique. Chrysler will roll out its new Cirrus and Dodge Stratus. And Chevrolet will ramp up production of the new Lumina and redesigned Cavalier. Meanwhile, Japanese carmakers plan to expand into Detroit's high-profit stronghold—the booming market for minivans, pickups, and sport-utility vehicles.

To boost sales, the Japanese are lifting marketing gimmicks from Detroit's playbook. Although they've raised prices 6% on average, they are increasing cash incentives, selling more cars at low margins into daily rental fleets, adding extra-value packages, and fielding stripped-down models in order to advertise attractive sticker prices. With a base price of $19,999, the new 1995 Nissan Maxima undercuts its predecessor by more than 10%. Cut-rate leases—such as the $1[illegible] per month deal Mitsubishi Motors Corp. had on its Galant earlier this year—aren't hurting, either. "The Japanese are gaining market share because they're buying it," says auto analyst Maryann Keller of Furman, Selz Inc.

Japan's new emphasis on competitive prices is helping reawaken talk in Detroit that the Japanese are dumping cars in the U.S. Japan watchers cite data showing the yen has appreciated against faster than the price of Japanese-made cars (chart). "We think they're during up to 50% on some luxury models," says Ford's Trotman. Yet such charges are notoriously difficult to make stick since the U.S. government is unlikely to find that the newly profitable U.S. industry has been damaged—a necessary step in order to levy antidumping tariffs.

Instead, Detroit wants to step up the pressure in the newly resumed trade talks between Washington and Tokyo. It wants U.S. negotiators to get tough

panese to commit to using the nber of dealerships selling U. S. s in Japan as a "numerical indi- or" of the Japanese market's enness.

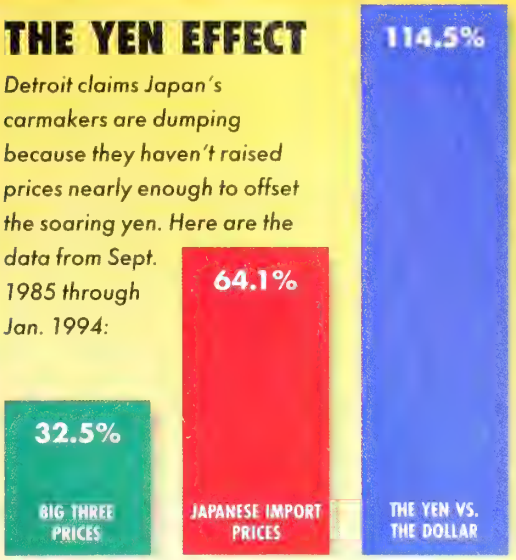
Still, the key battleground is in U. S. After a decade of relent- sly raising prices and moving models upmarket, the Japanese altering that strategy. "It's a l role reversal," says Robert J. omas, president of Nissan Motor rp. USA in Carson, Calif. "We've l [feature-loaded] profitable cars, l now we're doing some of the ne things the domestics did, like ating entry-level vehicles. At same time, the domestics are king their own marketing ad- tments" that have boosted prof- . Detroit is paring low-profit es to rental companies and has sed prices on such hot sellers the Ford Mustang and Jeep Grand erokee.

Japan's marketing ploys appear to be interim gambit. With the yen already bbing around 104, the manufacturers e counting on a massive restructur- g to lower costs to the point where ey can compete at 100 yen to the dol- r. And last year, for the first time, ore than half the cars Japanese compa- es sold in the U. S. were built in North merica, further insulating them from y appreciation of the yen.

E-CATCHER. That means Japanese pric- will continue to fall. "The run-up in panese prices is essentially over," says sse Snyder of Autofacts. Adds Christo- her W. Cedergren, senior vice-presi- nt at AutoPacific Group Inc. "By pass- g along savings gained through cost ductions, new Japanese cars over the ext four or five years will come out at wer prices." Cedergren believes that, y the end of 1996, Toyota Motor Corp.'s amry and Corolla models could be riced 20% lower than today's versions.

THE YEN EFFECT

Detroit claims Japan's carmakers are dumping because they haven't raised prices nearly enough to offset the soaring yen. Here are the data from Sept. 1985 through Jan. 1994:



DATA: COMMERCE DEPT., AMERICAN AUTO MANUFACTURERS ASSN.

Early signs of the trend are already here. To achieve the eye-catching price of its new $19,999 Maxima, Nissan added a stripped-down five-speed model, one it admits will make up no more than 5% of its volume but will entice buyers to visit its dealers. And Honda Motor Co. launched the latest version of its popular Accord sedan last fall with the same $14,330 sticker as the 1993 model. "We plan to use that approach with all our new cars," says Thomas G. Elliott, executive vice-president at American Honda Motor Co. in Torrance, Calif. Previously, Honda made each generation of Accord bigger and more expensive.

The sole holdout in the price-cutting game is Toyota—and its market share has dropped more than 0.7 points this year, to 6.7%, as a result. Yet analysts say Toyota has stripped more than $1,000 in production costs out of its luxury Lexus LS400 sedan—and that the new 1995 replacement will come in under this year's $51,200 sticker.

Japan's long-held edge in quality remains a powerful weapon, too, despite Detroit's substantial gains in recent years. "There's no question, when you look at price and quality, consumers will pay more for Japanese cars," says John J. Ferron, a partner at auto quality consultant J. D. Power & Associates in Agoura Hills, Calif. And the cars' higher resale values translate into a pricing edge through leasing. Monthly lease payments on a fully-equipped LS400 are $599—less than the average $728 per month when the car was introduced at $35,000 nearly five years ago. Contends analyst Snyder: "With leasing, the Japanese have eliminated the price advantage of the Big Three."

With its course in the U. S. market for passenger cars firmly established, Japan is hoping to start nibbling away at Detroit's lucrative markets for trucks. Earlier this year, Honda entered the sport-utility business with the Passport, an Isuzu Rodeo sporting a Honda nameplate. Late this year, it will introduce its own minivan. Toyota is readying a new Previa minivan. And all the Japanese companies have new sport-utility vehicles on the way.

"The Japanese are aggressively investing in new products," says analyst Cedergren. Still, he thinks Detroit's spate of new products will make it tough for Japan to gain much market share this year or next—though he predicts Japan's share will jump dramatically later in the decade. This time, Detroit isn't underestimating the Japanese. "They're going to come at us hard in sport-utilities. They're going to come at us hard in trucks," says Trotman. It all makes for a heck of a dust-up coming in the world's most competitive auto market.

By Larry Armstrong in Los Angeles with Hiromi Uchida in Tokyo and bureau reports

BROADCASTING

MUSICAL CHAIRS MAY BE THE HOT NEW TV GAME

The defection of eight CBS affiliates to Fox could spark a chain reaction

Laurence A. Tisch has never much cared for the cozy relationship between networks and their affiliated stations. When he took over CBS Inc. in 1986, the tough-as-nails chairman played hardball with his affiliates, dickering over their compensation and winning few points for charm. The stations groused, but few thought about dropping CBS, since its ratings were up and switching networks was thought to be fraught with risk.

No longer. On May 23, New World Communications Group Inc., controlled by financier Ronald O. Perelman, shocked the broadcast industry when it dumped all 12 of its network affiliations—eight of them with CBS—and instead signed on with Rupert Murdoch's much-smaller Fox Broadcasting Co. network. In exchange, Murdoch agreed to invest $500 million for a minority stake in New World, which is trying to become a television programming powerhouse as well as a station owner. The deal, clinched in about 10 days of supersecret negotiations, marks a coming of age for Fox, which Murdoch acknowledges had been "physically handicapped by our quality of distribution." Murdoch remedied that by inviting New World CEO William Bevins to his Los Angeles office in early May. The casual talk soon escalated into a major deal that was "financially compelling to both parties," Bevins says.

POACHING? Murdoch's midnight raid forces CBS into a mad scramble for affiliates in the crucial markets of Dallas, Detroit, Atlanta, Cleveland, Tampa, Phoenix, Milwaukee, and Austin. Even more unsettling, CBS will likely end up poaching affiliates of NBC and ABC, sparking a chain reaction of network-hopping that would leave viewers, advertisers, and network brass in a daze. "It is a tremendous body blow," notes Alan Bell, president of Freedom Communications' broadcasting group, which owns four CBS affiliates. "This will be one of the most fascinating games of musical chairs in broadcasting history."

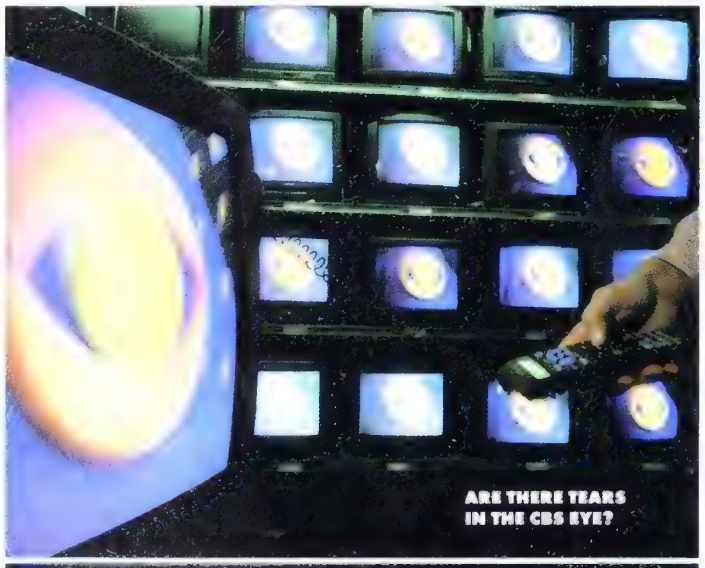
In fact, Fox's move may signal something even more profound: the unraveling of the network-affiliate relationship that undergirds the industry. Historically, affiliates served mainly as conduits for the networks, turning over the bulk of their airtime to network news, sports, and entertainment. With three predominant networks, they had few options in deciding whom to link up with. Suddenly, though, Fox has become a viable alternative. What's more, affiliates are buying more programming from syndicators—and, in the case of New World, even producing it themselves.

It was this ambition that drove New World to break with CBS in favor of Fox. Murdoch's network produces only 15 hours of prime-time programming a week, while CBS and its rivals each produce 22 hours. The difference frees up time for such New World productions as a sequel to Jacqueline Susann's *Valley of the Dolls*, which Perelman plans to air late at night. On CBS affiliates, the show would have conflicted with David Letterman. Fox, though, produces no late-night programming. So New World can now air the program when it wants and on stronger stations, giving it wider distribution.

In this way, too, the deal allows New World stations to produce more local programming, which generates a higher profit, since the affiliates get to keep all the ad revenue from those shows. "The switch allows us more local flexibility," says C. David Whitaker, general manager of WTVH, a 39-year CBS affiliate that is switching to Fox as part of the New World deal.

BOLDER. Such new independence poses thorny problems for CBS and its rivals. In the short term, Tisch may have to pay more to lure NBC or ABC affiliates. Otherwise, the Tiffany network will be left with weaker UHF stations. In the long term, all three networks will have to contend with affiliates who have more options and may be emboldened to jump ship if they aren't satisfied. Not surprisingly, Wall Street pummeled the stock of CBS, which was hit hardest by the Fox deal. CBS tumbled 12%, to 267¼.

CBS executives are struggling to find a silver lining. Anthony C. Malara, president of affiliate relations, says the network may cut deals with station owners to steal away NBC or ABC affiliates in several of the affected markets. "We're going to have to be very creative and clever to get it back," says Malara, who admits he was "in shock" for 20 minutes after learning of the defections. CBS research chief David F. Poltrack says the loss of VHF stations in those markets would only cost the network 1.5% of its



NOW, THE BIG FOUR

Profiles of the broadcast television networks

	ABC	NBC	CBS	FOX
AFFILIATES	227	213	206	184*
OWNED STATIONS	8	6	7	9
AVERAGE RATING 1993-1994 SEASON	12.4	11.0	14.0	7.2
OPERATING INCOME IN MILLIONS	$601.8	$288.0	$417.7	$261.2

DATA: COMPANY REPORTS, *BROADCASTING & CABLE* *34 ARE PARTIAL AFFILIATES

rime-time audience. In addition, Pol-ack claims that several of the New /orld stations fall short of CBS's average itings.

But the loss will hurt the network in her ways. The *CBS Evening News ith Dan Rather & Connie Chung*, for xample, could lose 5% of its audience, nce the UHF stations in New World's arkets don't have local news shows to ild audience for the national news. BS will also sell less advertising for ext season, though media buyers aren't re how much. And if CBS has to pay ore to lure new affiliates, it could ventually pay existing affiliates less. very CBS affiliate in the country is di-inished by some degree by what hap-ened," says Peter B. Desnoes, manag-g general partner of Burnham roadcasting Co., which owns five NBC nd ABC affiliates.

Murdoch, on the other hand, emerges big winner. His deal caps a costly trategy to vault Fox into the same ague as the Big Three—mostly at the xpense of CBS. Last December, Fox bid 1.6 billion for the NFL's National Foot-all Conference games for the next four ears, easily beating out incumbent CBS. reston Padden, Fox's executive vice-resident for affiliate relations, predicts, hese will not be the last strong VHS tations coming to Fox."

EISMIC SHIFT. With CBS and Murdoch oth prowling for affiliates, ABC and NBC re in for a battle royal. Although CBS is ops in overall viewership, ABC leads in ey demographic groups, and its smooth-r handling of affiliates over the years ay help protect its franchise. Last-lace NBC is more vulnerable. "We're ot sitting here with our head in the and," says outgoing NBC Television Net-ork President Pierson G. Mapes.

If Mapes and his colleagues take the ng view, though, they'll have to accept is as another seismic shift in their busi-ess. With the relaxation of government egulations, NBC and its rivals were al-eady becoming entertainment program-ers as well as distributors. Now, with ne networks' distribution systems un-er siege, film studios and other pro-rammers may think it a propitious time o seek out alliances with Tisch and his eers—perhaps even acquisitions.

Michael N. Garin, a media banker at urman Selz & Co., points out that CBS still a choice strategic asset—even af-er losing $561 million in market value ince May 23. But with Rupert Murdoch aking a seat at the networks' table, it ay not stay choice for long. Larry isch may want to start listening to any ffers.

By Elizabeth Lesly in New York and Mark Landler in New Orleans, with Gail DeGeorge in Miami and bureau reports

MURDOCH IN ASIA: THINK GLOBALLY, BROADCAST LOCALLY

Rupert has been snookered. That is what rivals said when Rupert Murdoch's News Corp. paid $525 million last year for 64% of Star TV, a startup Asian satellite network. Critics saw Star's basic strategy of beaming a one-size-fits-all set of English-language programming to an area covering two-thirds of the earth's population as badly flawed. They figured Murdoch couldn't build audiences and attract advertisers in a market covering dozens of countries and languages.

Well, it doesn't pay to underestimate Rupert Murdoch. Star is a long way from profitable: analysts estimate it will lose $20 million this year on sales of $150 million. And it faces upcoming competition from former partner Viacom Inc., which plans to launch a Mandarin-language MTV and relaunch English-language MTV in Asia. Star formerly broadcast the network in Asia.

Still, in less than a year, the media tycoon has scrambled to completely reverse Star TV's strategy, ditching its English-only format in favor of local-language programming for its Asian audiences. Household penetration has improved, and analysts figure ratings are on the rise as well. "It is looking like a very good investment," says Kirk C. Sweeney, analyst for Lehman Brothers Asia Ltd.

PAN-ASIAN MYTH. Murdoch's big move occurred in May, when he began customizing Star's music programming to fit Asia's widely divergent tastes. In Taiwan, hearts throb to saccharin Chinese love ballads. Indian viewers prefer high-action music videos. "The idea that there is a pan-Asian taste in music is a myth," says Don Atyeo, Star's music station manager.

STAR'S NEW FARE

MUSIC

North Asian channel stresses Chinese pop; South Asian offers Hindi and English tunes

SPORTS

Chinese viewers get soccer and gymnastics; Indians get the same plus cricket

MOVIES

Hong Kong studios provide Mandarin-language films for Chinese; Hindi-language movie channel due this fall

DATA: COMPANY REPORTS

Now, Indians and Chinese will get just what they want on Star TV. The northern beam of Star's satellite, which covers Taiwan and Hong Kong and reaches an estimated 30 million viewers in mainland China, will mostly show Chinese pop music. The southern beam, which will cover India and Southeast Asia, will stress Hindi and English music.

Star is adopting its strategy of playing to local tastes in other areas of programming as well. It has split the signal on its sports channel to give a heavier dose of cricket to Indians and more soccer, gymnastics, and track to the Chinese. On May 1, it launched a pay Mandarin movie channel, and plans a pay-movie channel in Hindi this fall. In the northern beam, the movie channel will replace the British Broadcasting Corp.'s English language news service. Critics say Murdoch dumped the BBC after Beijing protested its hard-hitting coverage of China, but Murdoch says it was booted because few people watched it.

Eventually, using new digital compression technology, "we could offer dozens of channels with customized versions of sports and movies," says Gary Davey, a News Corp. veteran installed as Star's managing director last year.

For Murdoch to really turn Star into a solid performer, however, he must persuade Asian viewers to pay for some of its service. For now, profits remain elusive. But, says Lehman Brothers' Sweeney, "what is important is the home run potential." Capturing the leading share of the biggest television market in the world would be one of the longest home runs in this tycoon's career.

By Pete Engardio in Hong Kong

DEALS

STRAINED PEAS, STRAINED PROFITS?

Gerber may not justify the high price Sandoz will pay to swallow it

The top brass at Swiss drugmaker Sandoz Ltd. have long drooled over Gerber Products Co.'s fat margins and huge, 73% U. S. market share. So in late April, when word got out that investment bankers Goldman, Sachs & Co. and Wasserstein, Perella & Co. were quietly auctioning the baby-food maker off, Sandoz executives quickly cooked up a $3.7 billion offer. Just as quickly, on May 21, Gerber's board of directors met in Chicago to approve the deal.

The vote was followed by a champagne toast—with very good reason. At 29 times Gerber's fiscal 1994 earnings from ongoing operations of $127.4 million, Sandoz will shell out a premium well above even the rich food-industry deals of the go-go 1980s. "They paid top dollar," marvels Prudential Securities Inc. analyst John M. McMillin. "It's going to take five years before they see any kind of return on this investment."

Indeed, Sandoz faces a daunting task in actually making this merger fly. The companies fit geographically, with Gerber strong in the U. S. and Latin America while Sandoz has solid bases in Europe and Asia. But melding the very different organizations "represents a very tough challenge," says John A. Quelch, a Harvard University marketing professor. And by pushing Gerber into Europe, Sandoz could start a fierce price war among powerful, moneyed giants in a fragmented market.

Gerber dominates the U. S. baby-food market, generating aftertax profit margins of 11%—nearly tops for the food industry. And outside the U. S., the potential for growth is tremendous: As women in developing parts of the world join the workforce and incomes rise, so should consumption of prepared baby food. In Poland, for instance, per-baby consumption is less than 12 dozen jars per year, far below the 55 dozen in France and 50 dozen in the U. S.

But it could take years before large numbers of consumers in places such as Eastern Europe and Asia switch to jarred baby food. In the meantime, Sandoz' sales and distribution networks in Western Europe could get indigestion from the slew of Gerber products. Sandoz' food operation, based in Bern, will have to swallow a company as big as itself. Though it sells products such as Ovaltine, a malted beverage, and Wasa, a crispbread, through supermarkets as well as small specialty shops, it has no experience selling baby foods.

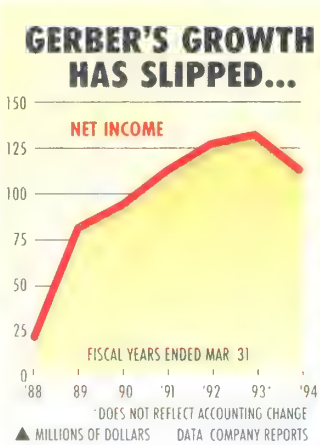
TIME FOR GOODWILL. It likely will learn the hard way. "We will invest what it takes to develop the business," says Raymund Breu, Sandoz' finance director. But the largely stagnant European market is brutally competitive. Rivals such as H. J. Heinz, Nestlé, and French multinational Danone (formerly BSN) already have hobbled Gerber's efforts at breaking in. Gerber Chairman Alfred A. Piergallini admits the company is barely breaking even there, after years of effort. "That's where we're the weakest," he says. Heinz, which has an industry-leading one-fourth share of ropean baby-food sales and is inv ing aggressively in international r kets, vows to be particularly combat "You'd be foolish to try to compete us there," warns Heinz Chairman thony J. F. O'Reilly.

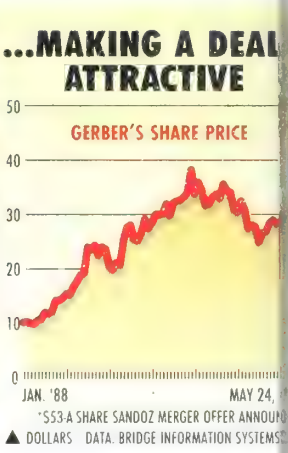
Gerber may face as many obsta distributing Sandoz' food product the U. S. While it has successfully dled Bristol-Myers Squibb Co.'s h formula for two years and just took Scott Paper Co.'s baby wipes, it little success with products aime both kids and adults, such as Juic More, a juice-and-fiber blend. And company's 350 merchandising spe ists, who work full-time sprucing Gerber displays in grocery stores, c get spread too thin. "The minute take those folks out of the baby- aisle, you dilute their effectiven says Kidder, Peabody & Co. ana David Rabinowitz.

Some unique financial factors working in Sandoz' favor. The Sw franc's strength against the dollar ma this the perfect time to buy in the U as intense dealmaking by Swiss c glomerates bears out (page 31). Curr international accounting standards, m over, allow Sandoz to write off aga earnings the $3.2 billion in goodwil will acquire in this deal.

And Gerber's annual cash flow about $165 million would be 70% of w Sandoz could earn by investing $3.7 lion at 6% interest. By selling off du cated buildings and equipment from newly merged companies, says Breu, Year One, we will not have any dilu of [earnings]." Some analysts think right. But even if the math adds up ily, the looming battle in supermar aisles looks a lot tougher.

By David Woodruff in Detroit, John Templeman in Bonn and Keith Alexander in Pittsburgh





ODWILL GESTURE: CORPORATE TAKEOVERS WILL COST THE SWISS MORE NEXT YEAR

HE SWISS ARE COMING! HE SWISS ARE COMING!

ish and facing an accounting deadline, they're snapping up U.S. outfits

hey're Swiss. They're rich. And they're snapping up American companies.

First came Swiss pharmaceutical giant che Holding Ltd.'s stunning $5.3 bil- all-cash bid for Syn- Corp. on May 2. en, almost three eks later, Sandoz ., another Swiss rmaceutical giant, of- ed $3.7 billion for Ger- Products Co. And re's likely to be plen- more to come.

Why are Swiss giants hing—wallets open— erseas? With the enback weak, U. S. npanies look cheap Switzerland's giant ltinationals. More im- tant, Swiss compa- s are eager to spend ney fast. Why? Well, International Ac- unting Standards (IAS) about to change matically.

NG WAIT. As of Jan. 1, European npanies will have to write off good- l—the difference between the value the assets they are buying and the price they are paying—over 20 years. Under current regulations, when Swiss and other European companies make acquisitions, they can write off goodwill against taxes the year they make the deal. U. S. companies, on the other hand, have to capitalize goodwill and write it off over 40 years.

The changes could set off a spate of dealmaking by companies across the Continent. But the Swiss are likely to be outbidding everyone else—mainly because they have more cash. Six of Switzerland's largest and most predatory companies had a total of nearly $40 billion of ready money on hand at the end of 1993 (table).

Swiss acquirers' sights are already trained on potential targets. Nestlé is still digesting its Source Perrier deal and is also munching on a $710 million buyout of Finitalgel, an Italian ice-cream maker. Even so, say Swiss stock market mavens, if a company such as Chicago's tightly held Wrigley Chewing Gum Co. came into play, Nestlé would pounce. Peter McDougall, a drug analyst at London's Barclays de Zoete Wedd, says drug giant Ciba-Geigy is scouting for generic-drug companies. And holding company Richemont is looking for luxury-goods companies to complement its Cartier and Karl Lagerfeld units.

SWITZERLAND'S MONEYBAGS

Cash hoards of major Swiss companies*	Billions
ROCHE HOLDING Drugs	$10.3
ABB Engineering	5.7
SANDOZ Drugs	4.4
CIBA-GEIGY Drugs	5.1
NESTLE Food	3.6
RICHEMONT Tobacco, luxury goods	3.5

BIG HILL OF BEANS. All this because of an accounting-rule change? It might look like bean-counting arcana to nonspecialists, but the shift will fundamentally change the math of European mergers and acquisitions. Take Sandoz' bid for Gerber. Because Gerber only discloses net shareholders' equity of $350 million, Sandoz has a potential $3.2 billion write-off. That, says Claudio Werder, a pharmaceuticals analyst at Zurich's Bank Vontobel & Co., is enough to ensure that Sandoz' earnings won't be diluted this year, even after it lays out all that cash for Gerber.

And there's another wrinkle. The goodwill write-offs make the acquiring companies look much more profitable than they would under U. S. rules. Because its assets are reduced by the amount of the write-off, a company's return on assets (ROA) looks a lot higher. Swiss food giant Nestlé, for example, showed an ROA of 16% on its 1993 accounts. Had it followed U. S. accounting practices for past acquisitions, such as France's Source Perrier and the U. S.'s Carnation Co., Vontobel analysts calculate, its ROA would have been a decent—but much slimmer—9%.

This financial legerdemain explains why Swiss companies are ready to pay what U. S. analysts consider loony prices. Sandoz, for example, is offering a 53% premium over Gerber's last prebid trade. Syntex went for an even larger 57% premium.

Not surprisingly, U. S. sellers are happy to entertain Swiss bids. The Swiss spurn fancy financial engineering, instead plonking down good old-fashioned cash on the barrel. "Big Swiss companies are simply cash machines," says Hans Kaufmann, head of research at Zurich's Bank Julius Baer. "Every few years, the war chest is full. Then, they go for an acquisition."

When a target becomes available, the Swiss companies' huge cash piles mean they can move at warp speed. "They don't have to talk with 10 banks to put a deal together," says a Swiss banker. Sandoz had eyed Gerber for a decade—then tied it up in less than a month after hearing it was for sale.

Call 1994 the Year of the Swiss. And stand by for a lot more noisy, quick-fire takeover moves.

By John Templeman in Bonn

PEOPLE

J.J. PICKLE, GIBBONS, ROSTY: GIBBONS' CRITICS SAY HE IS TOO RIGID

HE'S NO ROSTENKOWSKI

Clintonites are worried Sam Gibbons can't control Ways & Means

In the predawn of June 6, 1944, Army paratrooper Sam Gibbons landed behind German lines in occupied France, armed with an antitank mine, a gas mask, and two warm cans of Schlitz. As D-day unfolded, the 24-year-old captain survived a bloody ambush to complete his mission: securing bridges near the town of St. Come-du-Mont. The American beer cans were placed in the middle of a road in Normandy as a symbol of the Allied liberation.

Brave, utterly determined, and a little bit quirky—those all are traits that colleagues still ascribe to Gibbons. And he'll need such qualities and more to succeed in the new job he is about to take on. A 16-term Democratic congressman from Tampa, Gibbons is in line to ascend to the powerful post of House Ways & Means Committee chairman. The current occupant, Dan Rostenkowski (D-Ill.), is under investigation for alleged financial irregularities and is expected to lose the post through a felony indictment or a plea bargain with U. S. prosecutors. Friends and colleagues say that Gibbons, who declined to speak to BUSINESS WEEK, is ready for the new challenge. "When the muskets start firing, this guy is at his best," says lobbyist Jack Valenti, chief executive of the Motion Picture Association of America, who has known Gibbons for 30 years.

But his best may not be good enough. Gibbons, 74, is regarded by peers as being a bit too rigid in his views and having a short fuse. Skeptics wonder if he can handle the oversized egos of one of Congress' key committees, especially with President Clinton's top priorities—health care, welfare reform, and the General Agreement on Tariffs & Trade—hanging in the balance. "He's very smart and dedicated," says Lawrence Chimerine, managing partner of the Economic Strategy Institute, "but it's an open question whether he has the political skills to do the horse-trading and arm-twisting."

The Administration clearly is nervous about losing Rostenkowski, a reliable ally who played an important role in securing passage of the President's economic plan last year. Even while burdened by the grand jury probe and a tough Democratic primary, Rostenkowski labored mightily to craft a health-care package acceptable to the White House, Democratic liberals, and business. Gibbons, chairman of the Ways & Means trade subcommittee, has not been a central player in the debate.

Stylistically, Gibbons and Rostenkowski couldn't be more different. The current chairman is an intimidating Chicago pol who keeps tight control over the committee and eschews ideology, preferring to cut deals on contentious issues. Gibbons is seen by many as a gifted interested mainly in free-trade issues and he may lack the clout to quell revolts from subcommittee chairmen seeking more autonomy.

Where Rosty is known for his calm, Gibbons' outbursts are the stuff of Capitol Hill legend. When Kevin L. Kearns, the president of the U. S. Business & Industrial Council, complained during a hearing last November about the loss of U. S. sovereignty under GATT, Gibbons snapped: "I'd just get a gun and blow my brains out if I were you." Kearns, who is still fuming, terms the incident "an extraordinary breach of decorum." But one Gibbons defender argues that despite his temper, the congressman knows how to cut political deals. "His very strong views don't get in the way of his better judgment," insists the associate.

NECK-BUSTER. Gibbons entered Congress in 1963 with a reputation as a progressive Southerner with leadership potential. President Lyndon B. Johnson said he picked him to manage several anti-poverty initiatives because the young Floridian could "vote Northern and talk Southern." Valenti, a former Johnson aide, calls Gibbons "a stand-up guy who put his neck on the line. LBJ would say, 'Sam Gibbons doesn't cut and run.'"

Gibbons was eventually rewarded with a coveted slot on Ways & Means. But he slipped off the fast track in 1972, when he mounted an abortive campaign for House Majority Leader against the immensely popular but far more liberal Thomas P. "Tip" O'Neill. That race haunted Gibbons in 1980, when the top spot on Ways & Means opened up. O'Neill, then House Speaker, persuaded Rostenkowski to forgo a leadership contest and take the job, leaving Gibbons as second-in-command.

Most observers have low expectations for Gibbons as the committee's chief, but his admirers note that he is sure to give his all to the task. Says former Ways & Means colleague Bill Frenzel (R-Minn.): "When Sam sets his mind to doing something, he just busts his neck to do it." Still, having survived D-day bullets, he now may run into flak that's even harder to avoid.

By Richard S. Dunham in Washington

SAM M. GIBBONS

AGE 74 **HOME** Tampa

BACKGROUND A lawyer and state legislator first elected to Congress in 1962. He's now No. 2 among 24 Democrats on the House Ways & Means Committee

POLITICS A social liberal and ardent supporter of free trade

BIGGEST MISCALCULATION His ill-fated race against Tip O'Neill for House Majority Leader in 1972 earned him political enemies that have endured for two decades

DATA: BUSINESS WEEK

BIG BLUE TWISTER OCKS MADISON AVENUE

ilvy snares all of IBM's advertising work. Will it get buried?

t was like the Madison Avenue portrayed in the movies, in which account-hungry sharks read over peo-'s shoulders on trains and eavesdrop lunches for hot tips. An intense, nth-long series of meetings often ran into the night. The client was only erred to by a code name. Presentaıs were kept in a laptop computer. l when, on May 24, the news broke t IBM will consolidate its $400 million 500 million in worldwide advertising me agency, Ogilvy & Mather Worlde Inc., a new reality hit adland with force of a four-martini lunch.

)gilvy, led by Chairman Charlotte rs and key lieutenants th America President helle B. Lazarus and sident/Worldwide nt Services G. Kelly ea, had pulled off the gest account grab r. The jobs of up to people working on accounts at 40 other ncies around the ld were in doubt. lvy, meanwhile, was antly under pressure perform. "People tell we are going to be g in a fishbowl," says rs, who clearly relishhe spotlight.

he reason for the ssure is clear: The solidation is the gest example yet of a or trend—multinationlients paring back ncies to gain econos of scale and forge ore consistent brand ge worldwide. Rival marketers want ee if it can work. And IBM wants re-s—yesterday. Indeed, within minutes ne announcement, an IBMer in Helsinalled Ogilvy's local office wanting to ne over right away" to get started.

NTING TASK. Ogilvy has a lot to e. The WPP Group PLC unit, which $5.8 billion in billings last year, up million from 1992, is taking on an unt that produces and places thouls of ads—taking into consideration languages and cultures of dozens of ıtries. It has to demonstrate that IBM name—battered by the company's downsizing and low-cost competitors—can be marshaled to sway sales in an industry that has been driven by the latest technologies and the lowest price. The first ads are expected this fall.

Ogilvy faces a daunting task just getting up to speed. Unlike most agency reviews, it did not present consumer research or ideas for ads. Instead, meetings between the two focused on the agency's approach to managing brands—dubbed "brand stewardship"—and reviews of products and services Ogilvy handles globally. "We know that it is a world-class brand that is in the process of redefining itself," says Worldwide Client Services President O'Dea.

"People tell me we are going to be living in a fishbowl"

–Ogilvy & Mather Chairman Beers (center), celebrating with Presidents Lazarus and O'Dea

IBM, which has been running vastly different campaigns from unit to unit, acknowledges that "we were underutilizing a great brand," says Abby F. Kohnstamm, vice-president for corporate marketing. What caught IBM's eye at Ogilvy is the agency's success at so-called "global branding." Since Beers took the helm in 1992, Ogilvy has steadily picked up international assignments. For instance, it has expanded its assignment on Lever Bros. Co.'s Dove soap from the U. S. to 33 countries. With Lever's Pond's creams and lotions, Ogilvy has gone from a handful of countries to 40. It also recently launched a global campaign for American Express Co.—the former home of both IBM Chairman Louis V. Gerstner Jr. and Kohnstamm.

Ogilvy has already roughed out an international structure for working on the account. It expects to have three layers of management, direction to be set by a management team in New York. On the next level, offices in Paris, Tokyo, and probably Florida would coordinate the business for Europe, Asia, and Latin America, respectively. Individual offices would then localize ads in the countries. The agency has 270 offices spread across 56 countries.

MAJOR LAYOFFS. And the losing agencies? Many say they agree that IBM had to consolidate its accounts, but they find the move devastating nonetheless. Major layoffs seem inevitable. The biggest losers include Interpublic Group's Lintas Worldwide, which had $85 million to $90 million in IBM billings, and DDB Needham Worldwide, which had about $50 million in billings, including European advertising for the PC. Another casualty: Merkley Newman Harty, a creative boutique of Omnicom Group Inc., which had just launched a $40 million campaign for IBM PC Co. that accounted for about half of its billings. "I feel like a guy standing on the deck of a sailboat who just got swept off by a wave," says Kenneth Olshan, chairman of Wells Rich Greene BDDP Inc., which handled $50 million in IBM billings.

Competitors wonder if Ogilvy won't get fouled up by the IBM account's complexities. Indeed, a rival computer executive calls it "the toughest ad challenge in the computer industry." That's because Ogilvy must create a unified image for a company with many competing and overlapping products. IBM's mainframe, for instance, competes with its minicomputer, which overlaps and competes with its PC.

Ogilvy is gearing up for a "brand audit" of IBM—intensive research of the company's customers to define its brand image. "We feel we'll be tested, stretched, and challenged," says Beers. Scores of rivals will be watching to see if they can pull it off.

By Jonathan Berry, with Ira Sager, in New York

AIRLINES

USAIR'S FRIGHTENING LOSS OF ALTITUDE

With losses exceeding $1 million a day, a restructuring is crucial

When D. Scott Mitchell began mapping out a trip to visit friends in Washington, D. C., the 42-year-old Buffalo (N.Y.) executive was debating whether to fly via USAir—his regular airline—or make the eight-hour trip by car. Then an ad for Continental Airlines Inc.'s new low-fare service caught Mitchell's eye, and he quickly snapped up round-trip tickets for himself and his wife for $157 each. Mitchell admits he didn't bother checking fares at USAir. "I didn't think they could come anywhere near," he says. The rub for USAir Group Inc.: the Arlington (Va.) carrier had a $125 fare at the time, 20% less than Continental's.

It's a tale that shows just how hard USAir is working to become competitive—and how little it's getting for its efforts. Beset by low-cost rivals such as Continental and Southwest Airlines Co., USAir is struggling to pare back the industry's highest operating costs (chart). Yet any progress it makes is threatened by new woes. It was hit by one blow on May 17, when 7,700 of the airline's ground-service workers—fearful of layoffs—voted to unionize. Then, on May 23, British Airways PLC Chairman Colin Marshall announced that unless USAir can drastically reduce its costs, he is mulling a write-down of his $400 million investment, dampening chances that BA will serve as USAir's financier of last resort.

For USAir, the consequences of all this could be dire. With a deficit that now exceeds $1 million a day, many analysts believe the airline—which has lost a total of $2.4 billion since 1988—could run out of cash by early 1995. "USAir is on the critical list," says Michael K. Lowry, president of Aviation Forecasting & Economics Inc., who predicts losses of up to $600 million this year on revenues that should hit about $7 billion.

USAir executives are quick to dismiss any talk of a cash crunch. Reports of USAir's death "are premature," says Chairman Seth E. Schofield. "There is not an immediate liquidity crisis." Schofield believes USAir's $370 million in cash on hand plus $150 million from receivables should be more than enough to sustain it as it tries to restructure. "We are at the point where we expected to be at this time," he says.

Indeed, even bearish analysts concede that USAir could pull back from the brink. They see Schofield's May 12 decision to postpone delivery of 40 Boeing Co. planes valued at $1.9 billion and cancel options on an additional 76 jets as a start. And some analysts say if it gets concessions from workers, the airline could raise more money on Wall Street.

Yet even Schofield acknowledges his task is daunting. His job won't be do he says, until "we have permanently a fundamentally changed our cost str ture." The 37-year company veteran cently initiated talks with the airlin four unions on ways to slash costs. won't say how much he hopes to sa but union sources say USAir wants cut labor costs by 20%, or more th $500 million annually.

NO FEAR. The unions, however, may be in a giving mood. They're fumi that on May 20 the carrier switched remaining freight- and mail-handling erations from its own employees t subcontractor—a move intended to sa $10 million a year. "It was an unc scionable act," rages Victor Mazzoc an assistant general chairman of the ternational Association of Machinis which may represent the ground wo ers. Wall Street analysts believe US could have to cede at least 30% own ship to employees in exchange for j and pay cuts and changes in work rul

Schofield, mea while, is trying make USAir's op ations more ef cient. In July, t carrier plans to e pand "Operati High Ground," effort to tu around USAi planes within minutes, vs. t current 45 minut Schofield says t program, now in fect for 22 sh routes, will be e panded to 100—t equivalent of givi the carrier 12,0 more seats to sel

Even that m not be enoug though. With low-cost rivals able to into nearby underused airports, so consultants believe the carrier sho consider scaling back its hub-and-spo system in favor of the shuttle syste used by low-cost rivals.

USAir followers, however, say th don't sense the atmosphere of fear the airline that prompted Northwe Airlines Inc. and Trans World Airlin Inc. to take drastic survival measur "Company management is in incredib denial," says one bond analyst. If t sea of red ink doesn't produce the cri mentality that's needed, it's hard to s what will.

By Dean Foust in Washington, wi Keith L. Alexander in Pittsburgh a Aaron Bernstein in New York

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TOBACCO

SOME STATES ARE SUING TO RECOVER SMOKING-RELATED HEALTH-CARE COSTS

THESE DAYS, WHERE THERE'S SMOKE, THERE'S A LAWSUIT

Cigarette makers, used to winning, now face a changing legal landscape

It's a phenomenal winning streak: Despite scores of cases blaming the industry for debilitating illnesses and deaths, cigarette makers have gotten off scot-free. With mountains of cash and seemingly unmatched legal stamina, they've convinced juries that smokers assume personal risk with each puff. It has proved an airtight defense.

But the legal landscape is changing fast. Tobacco cases are attracting well-heeled plaintiffs' lawyers willing to go the distance. The lawyers are bringing new, potentially more powerful lawsuits—class actions alleging that millions of people have been hurt by addiction. States are jumping in, too: On May 23, Mississippi sued to recover Medicaid and other costs of smokers' ailments; Florida is poised to follow.

A key element in all this maneuvering may turn out to be a set of 30-year-old documents. In early May, internal papers from Brown & Williamson Tobacco Corp. were leaked to key members of Congress and the press, including BUSINESS WEEK. The documents support claims that the industry knew—perhaps since the 1940s—that cigarettes are addictive, plaintiffs lawyers contend. "They've conducted a masterful fraud," says Wendell H. Gauthier, who has filed suit in a Louisiana federal court on behalf of all smokers.

GANGING UP. The industry response to all this? Don't believe the hype. Tobacco companies still argue that smoking is not addictive. Says Philip Morris Cos. attorney Charles R. Wall: "The [B&W] documents have been mischaracterized in the press." Since B&W claims they were stolen, the documents may not be admissible, Wall notes. Besides, he argues, "juries know that millions of people can and do quit smoking."

Millions more don't. That's where the class-action strategy comes in. The addiction argument opens the manufacturers' liability to a cross-section of plaintiffs. So far, the industry has been le to settle cases, preferring to sap th nancial strength of its adversaries. "T have shown the propensity to gang on a plaintiff and just whip the l out of them," Gauthier says. But Gau er has enlisted 50 firms as allies. gether, they have committed at le $10 million to bankroll their attack.

The promise of megadamages is key attraction. The list of powerful pl tiffs' lawyers now includes Melvin Belli, Stanley M. Chesley, and oth who have won big in the legal br over asbestos and breast implan States' Attorneys General are targe the industry, too—with the deep poc of state treasuries behind them.

FIRST STRIKE? The class-action strate gaining momentum. In Florida, an peals court unanimously agreed to a class action proceed on behalf of fli attendants who blame cancer and ot diseases on secondhand smoke. move reflects judges' willingness to sider tobacco litigation under the cl action rubric. Tobacco companies h asked the appeals court to reconsid

Washington may well deal the d sive blow to tobacco makers long fore the courts do. Convinced that industry has the technology to mani late nicotine levels, Food & Drug Adm istration Chief David Kessler hasn't vered in his promise to expl regulating tobacco as a drug. "The dence suggests that cigarette mak intend the obvious: that smokers cigarettes to satisfy their nicotine diction," Kessler told Congress recen

More likely, though, the first str will come from Congress itself. Re sentative Henry A. Waxman's Subc mittee on Health & the Environmen pressing B&W for an explanation of leaked documents. B&W CEO Thoma Sandefur Jr. is scheduled to testify fore the subcommittee on June 20. has hired Griffin B. Bell, a former At ney General under President Carter, Robert A. Bork to plead its case be Waxman. High-priced talent. But for first time, their opposition is imposi

By Maria Mallory in Atlanta, w John Carey in Washington

IF YOU CAN'T QUIT, SUE

CASTANO VS. AMERICAN TOBACCO

The class action, filed on Mar. 29, charges the tobacco producer with manipulating nicotine levels in cigarettes.

ALLMAN VS. PHILIP MORRIS

Filed in the Southern District of California on Mar. 30, this suit seeks to recover the cost of treatment for all smokers.

SPARKS VS. R.J. REYNOLDS

The class action charges Reynolds with deceptive business practices in targeting children with its Joe Camel ads.

MISSISSIPPI VS. AMERICAN TOBACCO ET A

The state sued on May 23 to recover smoking-related health care costs paid by state programs.

DATA: TOBACCO PRODUCTS LIABILITY PROJECT

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INVENTORY

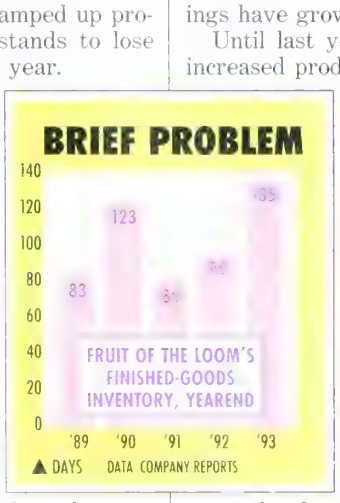
TOO MUCH PRUNING STUNTS FRUIT OF THE LOOM

Mistimed production cuts contributed to a 43% fall in first-quarter profits

AFTER MASSIVE LAYOFFS, THOUSANDS OF WORKERS WERE HIRED WHEN DEMAND SOARED

Wrong move, wrong time. Late last year, Fruit of the Loom Inc. saw underwear and apparel sales slowing. It cut back production sharply. Too sharply, in fact: In February, almost overnight, demand soared. Caught with its shorts down, the company hired back thousands of workers and frantically ramped up production—but Fruit still stands to lose $200 million in sales this year.

The result: A very public *mea culpa.* On May 17, William Farley told reporters after Fruit of the Loom's annual meeting that the miscalculation already has cost the company $40 million in lost sales and in costs related to firing and hiring. "We'll be forced to leave significant dollars on the table," he says. Analysts think profits should drop by 11% for the year, to $185 million.



This was the same Farley who once appeared in TV ads, doing sit-ups in a tank top, to pitch casual wear. In the 1980s, the irrepressible dealmaker and self-promoter picked up a conglomerate, Northwest Industries, followed by textile giant West Point-Pepperell Inc. He mulled a 1988 Presidential bid. By 1991, with his empire collapsing into bankruptcy, Farley just managed to stave off liquidation and hang on to Fruit.

WHIPSAW. Farley, now 51, has kept his head down since, concentrating on pushing Fruit underwear and sweatshirts around the world. And sales and earnings have grown steadily since 1987.

Until last year. Early in 1993, Fruit increased production across its clothing lines, figuring that a recovering economy would lead to higher demand. But despite aggressive retailer promotions, growth didn't materialize, and inventories rose to record levels (chart).

In the fourth quarter, Farley took drastic action, laying off 2,000 workers at 41 U. S. plants. Output dropped—just as consumers began to load up on new clothing. Executives aren't sure why demand rebounded but guess that "it was an accumulated impact of people not buying for a long time," a spokesman says. First-quarter earnings dropped 43%, to $25.1 million.

Competitors were caught in the same whipsaw: Sales of knit products at Sara Lee Corp., maker of Hanes underwear, jumped 17% during the quarter ended Apr. 1, following on the heels of the flat quarters. Still, analysts fault Fruit's inability to adjust. The company's explanation "clearly strikes me as rationalizing," says Steve Johnson, a managing partner at Andersen Consulting. "It was an operational problem on [Fruit's] end."

Fruit's snafu is especially untimely, coming just as Farley is driving the $1 billion company on an acquisition spree into new markets. In March, the company paid $100 million for the assets of Gitano Group Inc., a mass-market blue-jean and women's casual wear company that was in bankruptcy. The idea is to push Gitano through Fruit's powerful distribution network among mass merchandisers. And Fruit is negotiating to buy the license to the Calvin Klein jeans label.

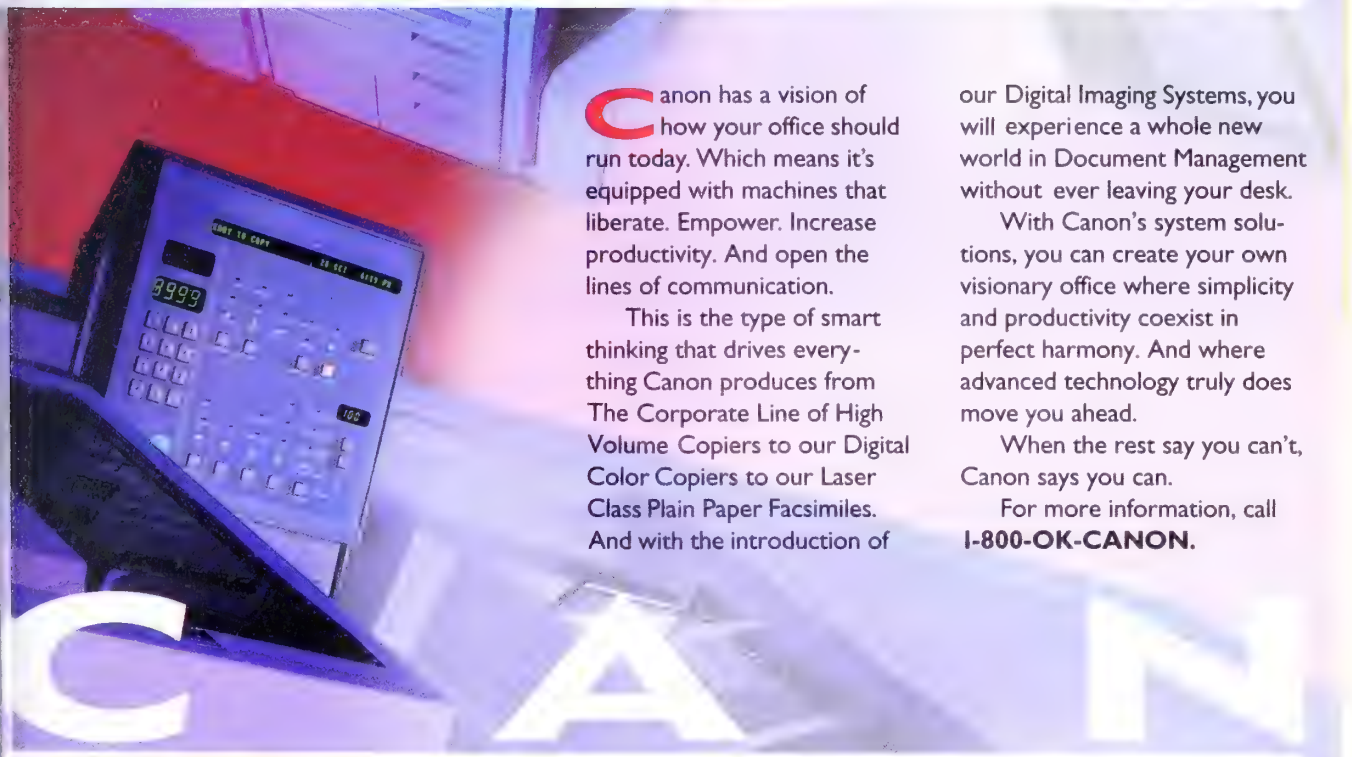
"STYLISH." Yet there are risks. The new strategy takes Fruit into the more volatile fashion-sensitive end of the clothing business. What's more, Fruit's current strengths are in knitted items, not wovens such as jeans, notes Wertheim Schroder & Co. analyst Thomas J. Dalatelli. Not a problem, says Farley. "Our apparel will be slightly more fashionable, stylish, not trendy. We will be more like L. L. Bean, J. Crew, or Eddie Bauer."

It's crucial that Farley make the new deals pay off, now that his personal bankruptcy campaign to bolster credibility is suffering. He has spent more than $1.1 billion on new factories and improved technology since 1985 to make Fruit into a low-cost producer. The company commands a leading 40% market share in men's and boy's underwear in the U. S. Through savvy marketing, moreover, Fruit has made the famous apple-and-grape logo a hot label on premium-priced casual wear in Europe.

Some shareholders, though, remain wary in the wake of the recent financial troubles. They have seen their Fruit stock, which rose seven-fold since 1991 to a peak of $50 last year, settle back to $30. Kemper Financial Services Inc. sold its 2.4% stake early this year when it became concerned about Fruit's outlook, says portfolio manager Bess Cotner. And a group of shareholders filed suit in late December, charging that Fruit misled investors about the weakening state of business.

Farley has lost none of his boosterism. What will it take to win back investor confidence? "A good second and third quarter," he says. "It's that simple." He's learning, though, that the rag trade is anything but.

By Susan Chandler, with Greg Burns in Chicago



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CORVETTE GENUINE CHEVROLET

In Business This Week

EDITED BY KEITH H. HAMMONDS

GTE HITS THE INFO ON-RAMP

Get out your Information Superhighway scorecard, and pencil in one more late player. On May 24, GTE announced a relatively modest $250 million proposal to offer video services to 500,000 homes by the end of 1995. GTE has been slow to enter the race to combine phone, video, and computerized services, in part because its executives remain skeptical about the demand. But its prototype of interactive cable in Cerritos, Calif., now concluded, was among the earliest tests of the technology. Now, GTE will deliver video to four markets where it provides local telephone service and says it plans to extend service over the next decade to some seven million homes.

COLUMBIA/HCA ADDS MORE BEDS

The Columbia/HCA juggernaut steams on. On May 23, the hospital giant agreed to acquire Dallas-based Medical Care America, the nation's largest operator of outpatient surgery centers, for stock valued at about $859 million. It's Columbia/HCA's third big deal in a year, following its $3.8 billion purchase of Galen Health Care and the $5.5 billion acquisition of HCA. Medical Care America fits nicely into that relentlessly expanding empire: Last year, the two companies began jointly operating hospital and outpatient surgery centers in six states. And 60% of Medical Care America's centers are in Columbia/HCA markets.

HELP STILL WANTED AT MERCK

Who will head Merck? Not Marty Wygod. The brash entrepreneur, who joined Merck last year when he sold his Medco distributorship to the drug company, resigned on May 24 as Medco chairman and a Merck director. His advice for finding CEO Roy Vagelos' successor: Go outside the company for an executive with "a fresh point of view." Wygod told BUSINESS WEEK he had Vagelos' backing for the post until March, when he opted out of the running. He says he lacks "the total commitment" the top job would take and wants to spend time with his family.

PHILIP MORRIS WILL STAY IN ONE PIECE

To split or not to split. That was the question Philip Morris' board of directors grappled with at a May 25 meeting. In the end, it decided against dividing the $61 billion conglomerate into separate tobacco and food companies—for now. That didn't sit well with some shareholders, whose shares have long languished in the low 50s. "It's clear that they have to isolate the potential liability" of the domestic tobacco business, says Alan Hevesi, comptroller of New York City. The company did, however, promote two top executives, a move that Michael Sandler, of Pacific Financial Research, interpreted as a "prelude to splitting up the company sometime down the road."

CLOSING BELL

THE EYE OF THE BEHOLDER

Inflation or no inflation? Depends on what numbers you watch. Consumer prices, growing at 2.5%, aren't menacing. But commodity prices might be a problem. The Knight-Ridder Commodity Research Bureau index surged 2% on May 23 to 238.36—its highest level since September, 1990. Oil prices were partly behind the increase: The continuing embargo on Iraqi supplies have sent U.S. crude futures to $18 a barrel from $14 two months ago. There's more behind the commodities climb, though. Worries about dry Midwest weather have juiced soybean and corn futures, and coffee is up 70% in three weeks—a result of Brazil's export cutbacks.

DATA BRIDGE INFORMATION SYSTEMS INC

HEADLINER

PLAYBOY: BACK IN THE BLACK—JUST BARELY

Christie Hefner, the CEO of Playboy Enterprises, is limping around in an ankle-to-thigh brace these days, nursing a painful ski injury. She should be back on her feet in the next few months. So should Playboy.

In early May, it unexpectedly announced a third-quarter loss of $8.4 million—as much as it earned in the previous three years. The company's stock plunged from 13 at yearend to under 7 amid doubts about Hefner's forays into cable TV and video. Cable operators have been slow to expand capacity, limiting opportunities for Playboy programming. And home-video sales are dragging. "This s definitely been a difficult y for us," Hefner says.

But analysts say Playb should return to profitabi ty—albeit not by much—in e fourth quarter ende June 30. Cable e erations are lo ing up. A Hefner, the year-old dau ter of Playb founder Hu Hefner, w took over as C in 1988, l trimmed expenses. S cut staffing by 10% i September and cleared h balance sheet with one-ti charges totaling $5.3 milli One of those charges reflec a loss on a documentar about, yes, Hugh Hefner.

By Greg Bur

DENNY'S DOES SOME OF THE RIGHT THINGS

On May 24, Flagstar apologized for apparent racism at some of its Denny's restaurants and agreed to pay $46 million to black patrons who have made more than 4,300 complaints to the Justice Dept. about discriminatory treatment. But the com ny still has plenty of work to do on a seven-year plan t improve minority-busine practices. Denny's, which h no minority franchisees amo its 1,500 restaurants, is co sidering 28 minority appl cants, none of whom is bla And it purchases only $20 m lion, or 3.3%, of its suppl from minority vendors—w below the company's seve year target of 12%. Wh Flagstar now has one bla director, only 7% of its ma agers are minorities.

ET CETERA . . .

- Kansas City Southern like will exit the rail business focus on financial services.
- Profits at Dell Comput soared 86%, even though sa remained sluggish.
- More privatization in Br ain: The postal service a rail tracks are possible.
- Sizzler International will s 25% of its U. S. restauran Its CEO will resign.

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BY OWEN ULLM

CLINTON AND GREENSPAN: IS AN EXPLOSION COMING?

Soon after Bill Clinton took office, Alan Greenspan got the seat of honor at the State of the Union address—next to First Lady Hillary Rodham Clinton. These days, Clinton wants to put the Federal Reserve chairman in the hot seat. The President has avoided public attacks on the central bank's repeated rate hikes. But when asked about them, Clinton's face betrays his feelings. "You get the sense that he's biting his tongue so hard it's hurting," says a Fed official.

That's an understatement. In private, senior Administration aides confide, Clinton has raged about the threat a sharp rise in rates poses to the economy's health. Some "explosions," as one adviser calls them, can be heard down the hall from the Oval Office. Top advisers fear another hike or two could trigger a nasty public spat between the White House and the Fed.

THE PRESIDENT AND THE CHAIRMAN

MARKET TURMOIL. Why? Clinton is an old-fashioned Southern populist who thinks a small rise in inflation is a fair trade-off for strong growth. And he's frustrated that his efforts to crow about positive trends in the economy are being overshadowed by the Fed moves and the resulting financial-market turmoil.

But Clinton has been convinced by top advisers that it's better for the Fed to slow the economy now than wait until the 1996 campaign approaches. They've also made him keenly aware that picking a fight with Greenspan would be a sure loser. When attacked by the White House, the central bank often asserts its independence by acting contrary to a President's wishes. Its most persistent bashing came from George Bush, obviously to no avail.

The only recent President to avoid public feuds was Gerald Ford. His chief White House economist—Alan Greenspan—advised suffering in silence. Peddling that same counsel to Clinton are Treasury Secretary Lloyd M. Bentsen, National Economic Council Chief Robert E. Rubin, and Deputy Treasury Secretary Roger C. Altman. All are fiscal moderates with Wall Street connections and ties to Greenspan: Bentsen plays tennis with the Fed chairman. Rubin, the former co-chairman of Goldman, Sachs & Co., belongs to the same country club. Altman, a former investment banker, knows Greenspan from the A-list dinner-party circuit. Greenspan is pleased that his friends have kept Clinton off his back.

The three wise men at first persuaded Clinton that small Fed rate boosts to preempt inflation would restrain long-term rates and keep the economic expansion on track. But when the Fed's moves were greeted instead with a huge runup in long rates from bond traders who wanted tougher action, Clinton challenged his advisers. A White House [illegible] recalls him grumbling: "Where's the [illegible] in long-term rates?" and chiding his team for being too conservative. "Whose side are you on anyway?" he asked playfully.

Since May 17, the Administration has been breathing more easily: Bond yields finally fell, in response to the Fed's half-point rate hike and hints of no further moves for a while. But that respite could be short. Rising commodity prices have triggered new inflation fears on Wall Street. And if the government's monthly employment report on June 3 shows strong job gains, Greenspan could be forced to act sooner than planned.

Clinton hopes his two Fed nominees, White House economist Alan S. Blinder and academic Janet L. Yellen, will discourage additional rate hikes. But Blinder, feeling pressure to prove his anti-inflation mettle, may not deliver.

Clinton's advisers fear that he won't hold his tongue much longer. That may only stiffen Greenspan's resolve and scare bond traders into driving long-term rates higher still. And the President would quickly discover that the only thing worse than silence is speaking his mind.

CAPITAL WRAPUP

WORKER TRAINING

High-tech training works so well in the military, maybe it'll help civilians obtain world-class skills. That's the idea behind an Administration plan to find applications for the expensive computer simulators the Pentagon has developed. The equipment lets tank commanders and foot soldiers hone combat skills on eerily realistic "virtual" battlefields and allows contractors to simulate the construction of advanced weapons systems. An interagency task force would teach tomorrow's workers in subjects ranging from physics to new manufacturing techniques. The program, planned to be announced this summer, is the latest in a string of Administration industrial policy initiatives.

DISABILITY REFORM

The Clintonites are gearing up to revamp yet another ailing social program: Social Security disability insurance. This year, the program will cost the federal government over $20 billion, more than traditional welfare. But the disability system is woefully inefficient. It takes months for many disabled people to get benefits, while others who can work keep collecting for years. The Administration hopes to roll out a proposal next year to fix both problems.

POLITICS

President Clinton is caught between conflicting domestic political demands as he struggles with his Haiti policy. The White House fears that if he lets thousands of Haitian refugees into the country, it will hurt the reelection prospects of Florida's Democratic governor, Lawton Chiles, who keeps reminding the President of that fact. But the Congressional Black Caucus is pressuring the White House to grant asylum generously to fleeing Haitians. Clinton is counting on a Democratic governor in Florida for 1996 reelection, but he needs the Black Caucus to pass health-care reform.

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THE NETHERLANDS

PHILIPS NEEDS LASER SPEED

IT HAS A BOLD PLAN, BUT CAN IT MOVE FAST ENOUGH?

Philips CEO Jan D. Timmer brooded at the podium. Despite his enthusiastic 30-minute demonstration of Philips Electronics' multimedia technology, there was tension in the hall. Shareholders at the annual meeting on May 5 in Eindhoven, The Netherlands, were not convinced Philips' future looked bright. One by one, they stood up and asked why new products were selling so slowly.

This wasn't the script Timmer had imagined. Indeed, it should have been a triumphal moment for the 61-year-old Dutchman. It was he who managed to revive the world's third-largest consumer-electronics company, wringing out healthy profits in 1993 from an unwieldy giant that lost $2.3 billion in 1990 and dipped into the red again in 1992 (chart). Nicknamed "Hurricane" Timmer, he slashed 70,000 jobs and axed money-losing businesses. Despite a flat market, the company rebounded from a $486 million loss in 1992 to a profit of $1.06 billion in 1993.

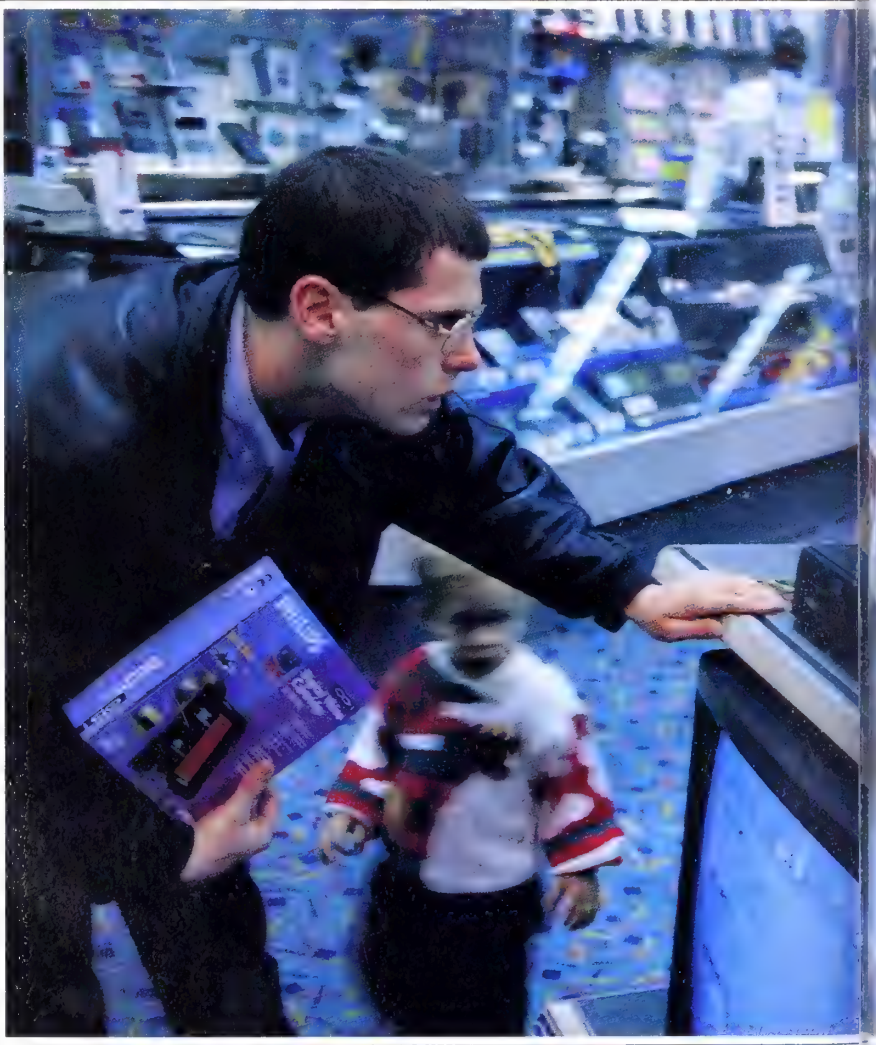
But Timmer has done only half the job—the easier half. To keep pace with global electronics powerhouses such as Sony Corp. and Matsushita Electric Industrial Co. beyond the year 2000, Philips must quickly find new engines for growth. Timmer has been hammering on that theme for three years. Yet Philips' sales rose only 1% in 1993, and $600 million of its profit was nonrecurring income from divestitures. Such promising products as Digital Compact Cassettes and Compact Disc-interactive have never gotten off the ground, offering fresh evidence that Philips is still struggling to turn great research into hit products.

Timmer, a stout man with a commanding presence, knows that he doesn't have forever to get Philips moving. "There are obstacles," he admitted to shareholders in May. But, he insists, "we will conquer them." In mid-June, Timmer will present a new strategy to the Philips supervisory board. Sources close to the company say it will accelerate Philips' move into software, services, and multimedia, where Timmer hopes to generate 30% to 40% of revenues by the year 2000, compared with just 20% today.

It's a bold plan for a company desperate to prove itself. "We can't continue to restructure. We have to develop new initiatives," says Henk Bodt, board member in charge of consumer electronics. According to top management, Philips is already hunting for a major acquisition, probably a leading U.S. interactive-software house.

Philips' PolyGram recording house is one of Timmer's bright spots. The unit, 75% owned by Philips, is striving to transform itself into a rich source of media products of all kinds. PolyGram, with $4 billion in sales last year, snapped up Motown Record Corp. for $325 million and acquired a handful of independent film producers. It has a surprise hit this season with *Four Weddings and a Funeral*. Polygram is also eyeing MGM-UA Communications Co., which Crédit Lyonnais aims to sell by 1996.

"THE GAME IS OVER." Timmer's drive into new multimedia markets also includes developing telecommunications services. As a start, it's licensing advanced messaging software from General Magic Inc. in Palo Alto, Calif., and selling it to European phone companies such as France Telecom.



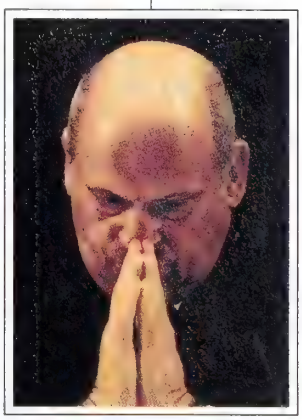
SNAIL'S PACE: BY THE TIME IT HIT THE MARKET IN 1991, CD-i'S NICHE WAS RAPIDLY VANISHING

rouble is, many of Philips' thrusts multimedia aren't designed to profits until the end of the decade. ıe meantime, Timmer has to grapple a number of problem areas, includ- iis all-important consumer electronics ion, which still makes up 36% of . After a slight loss in 1993, it eked a small profit in the first quarter. Timmer still has a long way to go to ı his target of a 4% profit margin.

ıe big trouble spot is Philips' Com- Disc-interactive technology—the one ner raved about at the shareholders' ing. Announced in 1985 and shipped in 1991, CD-i was to offer a myriad lucational and entertainment possi- es as it transmitted text, images, digital sound via compact disk (CD- to a TV screen. Philips had hoped would tap a huge market niche by ing to be a system more versatile game players such as Nintendo's Sega's but less expensive than puters.

ıt by the time CD-i hit the market, iiche it sought was vanishing. Con- ers either opted for personal com- rs with CD-ROM capabilities, which offered more performance for the money, or simple game machines, which had better software and cost less. Now game machines, too, are adding CD-ROM drives. "Their potential market is being eaten at from both sides," says Dataquest Inc. multimedia analyst Bruce Ryon, who expects Philips to sell only 200,000 units this year, vs. Timmer's projected 700,000.

"The game is over [for Philips]," sniffs Satjiv Chahil, vice-president for new media at Apple Computer Inc., which has sold 3 million PCs with double-speed CD-ROM drives. "Their technology is dated, and the market has taken off in another direction." Philips says it still sees a niche for CD-i. But bowing to the inevitable, it has started developing CD-ROM software for PCs.



TIMMER: STUNNED THAT HIS THREE-YEAR-OLD STRATEGY IS UNDERAPPRECIATED

Another big problem is Philips' Digital Compact Cassette technology. Analysts estimate Philips poured hundreds of millions of dollars into DCC, but it looks increasingly like a flop. DCC offers the sound quality of a compact disk but uses a digital cassette instead. Despite their name, DCCs are the same size as regular cassettes, so machines that play them will also take standard tapes. That way, consumers don't have to heave their collections. But at $500 or so, only about 100,000 players have been sold.

A third bet that hasn't paid off yet for Philips: active-matrix flat-panel displays. They're already used in laptop computers and will become ubiquitous in all kinds of electronic gadgets from personal communicators to car dashboards to TVs. The Japanese hold 95% of the world market and are frantically adding capacity as they cut costs. After challenging the Japanese in 1991, Philips now says it won't fully ramp up production until yearend. "They may not be technologically behind, but they are unequivocally behind in bringing the technology to market," says Arthur Firester, director of display research at SRI International Inc.'s David Sarnoff Research Center in Princeton, N. J.

UPHILL BATTLE. To speed the transformation at Philips, Timmer already has shaken up the top ranks at the inward-looking company, bringing in a slew of non-Dutch managers, many with strong international and marketing backgrounds. Floris A. Maljers, who retired as chairman of Unilever PLC in May, succeeded Wisse Dekker as chairman of Philips' supervisory board. Timmer also lured the director of Hewlett-Packard Co.'s research labs, Frank P. Carrubba, with the mandate to thoroughly overhaul research and development at Philips. "I sense a change in attitudes," says Dataquest's Ryon.

But Timmer clearly faces an uphill battle. When employees asked at a recent colloquium where Philips was headed and why, Timmer was stunned that his troops had failed to comprehend the plan he has tried to hammer home for three years now. In a fresh attempt at communication, Timmer plans to ask all 236,000 employees where they think Philips has come with his program of renewal, dubbed Operation Centurion. "It's an invitation for people to be very critical, even about people in charge," he says. "We must encourage entrepreneurial behavior at all levels." That's what Philips must do, all right—or endure a painful future of permanently diminished prospects.

By Gail Edmondson in Eindhoven, The Netherlands, with Neil Gross in Tokyo and Patrick Oster in Brussels

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LANDING FEES ARE SET SO HIGH THAT AIRLINES MAY STEER CLEAR

JAPAN WANTED AN AIRPORT. IT GOT A REAL MESS

Osaka's $15 billion Kansai may be a white elephant before it even opens

Satoru Kanazawa knows time is running out. A large countdown display hangs over his desk at the Transport Ministry in Tokyo. Its red digits are flashing an alert: Just 100 days until Kansai International Airport (KIA) opens for business.

Eight years after it ignited an ugly trade dispute between Japan and the U. S., Kansai airport is again in the public glare. With experienced American contractors relegated to minor roles, engineering fumbles by Japanese builders have pushed costs up to $15 billion—double the initial estimates. To compensate, airport authorities have jacked up landing fees, outraging domestic and foreign airlines and dampening demand for the airport itself.

As a result, even before the first jumbo jet touches down on the artificial island in Osaka Bay, KIA faces a half-billion-dollar loss in its first year, say transport officials. One reason is that interest on the debt alone will run $560 million a year.

SINKING LANDFILL. Staggering as they are, these cash losses are nothing compared with the wound to Japan's prestige. A decade ago, Japan's farsighted bureaucrats dreamed up Kansai as a new "gateway" linking North America and Japan with the emerging air routes of Asia. But the bungled execution has left neighbors questioning Japan's ability to pull it off. "There is much confusion about how so many things could have gone wrong," says Takao Toshikawa, editor of the political newsletter *Insideline*.

Diplomatic foul-ups have dogged Kansai since its inception. In 1986, airport authorities fought pitched battles with U. S. trade officials, who insisted that the construction be opened to American bidders. Japan managed to keep most of the business at home. But the struggle put Japanese bid-rigging in an international spotlight.

Technical blunders were just as embarrassing. The airport was built on an artificial island. But Japan's army of engineers couldn't prevent it from settling back into the bay. Shoring up the island caused the worst cost overruns—and delayed the opening by 18 months.

But the most serious miscalculation was over how many airlines would want to use the airport. In mid-May, KIA President Tsuneharu Hattori announced that international flights would number only 300 a week when the airport opens in September—less than half the original projection. KIA has bagged commitments from Canada, Australia, and a dozen small Asian countries. But big U. S. and European carriers are still waiting on the sidelines.

That's because KIA has set landing fees at $25 per ton, or about $10,000 for a jumbo. That's 10% more than at Tokyo's Narita Airport—the world's most expensive—and nearly five times as much as at New York's John F. Kennedy International Airport. "The operating costs at KIA are exorbitant," grouses Robert Lamansky, Northwest Airlines' director of government affairs in Tokyo.

"A PARADOX." Even domestic carriers were outraged that KIA would insist on such a premium, at a time when airlines are slashing jobs to stanch red ink. Indeed, international carriers racked up a cumulative $11 billion in losses over the past three years, according to Japan Airlines Chairman Susumu Yamaji. "That is more than the total profit of the airline industry since commercial flying began," he says. JAL alone lost an estimated $250 million in the year ended in March, 1994, on top of $423 million the year before.

Despite the firestorm, KIA's Hattori is standing firm, insisting that airport fees are just a small part of airlines' total costs. In the end, "demand for the new airport facilities will justify the higher costs," he says.

Even if the airlines recover and decide to pay up, however, Kansai will be a tough balancing act for Japan's bureaucrats. The Transport Ministry is determined to regulate the traffic to the advantage of Japan's own airlines. But foreign carriers such as Northwest and United Airlines are clamoring to be allowed to pass through Japan to other destinations, and so pick up lucrative Japanese business traffic. There's the rub: If the airport is too successful, it opens up Asia to the aggressive Americans, which will hurt Japanese carriers even more.

That's driving Japan's usually patient bureaucrats to distraction. "I'm caught in a terrible paradox," groans Kanazawa, the Transport director overseeing KIA. "To promote Kansai airport, I must have U. S. airlines increase their flight frequency. But if they end up dominating the booming Asian market, it'll be the end of Japan's own airlines." So much for the virtues of bureaucratic planning.

By Neil Gross in Tokyo

If Kansai succeeds, it may help foreign rivals scoop up Japanese passengers

EDITED BY STANLEY REED

OSS ANOTHER MATCH ITO THE RUSSIAN TINDERBOX: LABOR

n May 18, nearly half of the Russian passenger-airline crews scheduled to fly refused to take off, scrapping flights between many domestic cities. They were pro- ng plummeting safety standards that have contributed to ral recent air catastrophes. Later that day, the pilots d off the strike after the Yeltsin government and state ities agreed to talks.

was a quick end to a potentially crippling strike. But Rus- leaders from Boris Yeltsin down are wondering how long luck can hold. Russia's 60 million workers are fed up their country's economic mess and are taking action. n January to April alone, 288 strikes broke out, com- d with 264 for all of 1993. Most of the actions to date have short-lived. But the complaints from workers keep get- louder. Many now work in increasingly dangerous condi- . Many work for no pay. Many are paid in rubles that buy and less. It's a formula tailor-made for a season of labor oil, which will make Russian politics even more volatile.

ie workers are it to have more ons to protest. r factories, chok- on a huge collec- debt of 14 trillion es ($7.4 billion), don't have mon- o upgrade plants, products from other, or make olls.

mething's got to , and the catalyst be Russia's fast- ing privatization ram. It is enter- a new phase that vastly restructure y Russian indus- , tossing hundreds ousands out of work. The plan now is for experienced pro- onals to buy up controlling interests in the companies and the tough measures needed to improve performance. he same time, the government plans to curtail subsidies to ig state-owned factories and so force them into bank- cy. At least 1,200 plants with workforces greater than) will be the first to go, officials say.

EN JOBLESSNESS. By autumn, some predict, unemploy- t rates could shoot up as high as 20% in some industrial ers. Currently, official unemployment is only about 2%. Yet alled hidden joblessness may be as high as 18%. That er figure includes workers forced to take part-time shifts use of plant slowdowns and idle hands kept on by manag- who want to avoid paying severance. But permanent lay- now seem inevitable, says Alexey Sourikov, vice-president he Federation of Independent Trade Unions of Russia. the end of the summer," he says, "if we don't try to ent destructive forces from gathering steam, we're in a very, very hard time."

RUSSIAN COAL MINERS: UNIONS ARE STILL NEW AT CONFRONTING MANAGEMENT

Already, single-industry towns specializing in arms production, timber, metallurgy, and chemicals have been hit hard as production has dropped by some 25% since the first of the year. In the weaving center of Ivanovo in central Russia, for example, only about half of the labor force is working at all. Women workers suffer the most. They are usually the first to be let go but often last on the list for job retraining programs.

TOADIES NO MORE. Elderly workers are also at risk. Dmitiri Y. Usachyov has worked at Moscow's giant Zil auto plant for 50 years. He is staying on as a part-time metal caster to earn 150,000 rubles a month ($78). He needs the money to supplement a measly monthly pension of 87,000 rubles ($45). "Sausage costs 17,000 rubles a kilo," says Usachyov, standing at the grimy plant's front gate. But Zil's orders are dropping, and Usachyov and other older workers may soon be on the street.

Despite their protests, unions have displayed little power so far. At the Zil factory, a union newsletter plastered on a wall apologizes for not doing a better job. "Labor unions," sniffs Zinaida K. Voinova, a Zil worker. "They can throw them away."

Labor boss Sourikov acknowledges such problems, but notes that before the fall of communism, union leaders merely acted as toadies for party managers. They are only just beginning to learn the fundamentals of confronting management, negotiating contracts, and mapping out effective strike strategies.

Sourikov is hammering away at the government to do something about the flagging economy. And President Yeltsin is finally responding with tax cuts, the elimination of export quotas, and tax holidays to entice foreign investors.

Sourikov is also stumping for retraining programs. He says there are a lot of job opportunities in the fast-growing private retailing sector. He also sees hope for lawyers, economists, accountants, and those skilled in foreign languages. But such specialists are a minority, and he points out that housing shortages and residency restrictions keep workers from moving easily to new jobs.

While the government confronts the issue of unemployment, it's hoping that the strikes that keep occurring won't coalesce into a regime-threatening force. So far, the workers' haven't been able to pull off anything like the huge strikes that helped bring the Bolsheviks to power in 1917. But the anger is there, and effective labor leadership could eventually turn it into a tremendous force.

By Peter Galuszka in Moscow

JOSEF KOUDELKA, MAGNUM PHOTOS

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PROMOTIONS

WILMA! WHAT HAPPENED TO THE PLAIN OLD AD?

This wave of giveaways, tie-ins, and contests will outlast summer

The TV spot opens with a view of two shiny orbs set against a starry, outer-space expanse. But this isn't *2001: A Space Odyssey*. The "orbs" are two bald-headed men bearing rub-on tattoos. It's "Barqtoos II," the latest giveaway gimmick from niche soft-drink marketer Barq's Inc. Barq's has become the No. 2 root beer in the U. S., largely owing to a marketing strategy based on such consumer promotions. Barq's doesn't run traditional, warm-and-fuzzy image ads anymore. "We decided that, for us, it was a waste," says Fred C. Walters, director of marketing. The company uses its ads to promote its promotions.

Barq's has lots of company as it heads into the consumer-promotions industry's biggest season. Summer '94 is shaping up as one of the biggest blowouts ever for the business of giveaways, tie-ins, coupons, contests, and the like. And many of the ads consumers are likely to see will be closely tied to those promotions. McDonald's Corp. has launched a $40 million global blitz to hype its link with Universal Pictures' modern-stone-age epic, *The Flintstones*, with "Grand Poobah" value meals, "Bedrock" mugs, and Happy Meals. Burger King Corp. is countering with a tie-in to Walt Disney Co.'s big summer box-office entry, *The Lion King*.

And there's more. Coca-Cola Co. is giving away $350 million worth of stuff, including 200 red Ford Mustang convertibles, in "Coca-Cola Red Hot Summer." PepsiCo Inc., fighting back, will give away free Pepsi at 10,000 U. S. locations in the "Ultimate Pepsi Challenge." MasterCard International Inc. is distributing 45 million Sunday newspaper inserts offering discounts at 100-plus merchants, such as CompUSA and Pearle Vision Inc. in a summer MasterValues promotion tied to World Cup soccer.

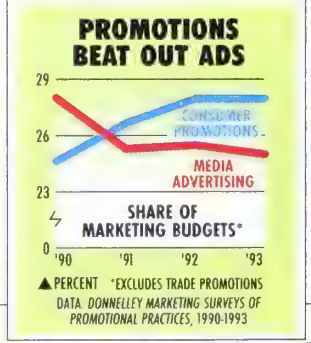
The barrage is more than a legacy of the recession. Consumer promotions are playing a larger role in marketers' strategies. Packaged-goods companies, marketing's bellwether, now spend more on such programs than on media ads (chart). ar keters who once used promotions to re ate short-term bursts in sales are incr ingly seeing them as "a permanent integral element of the brand," says M K. Heffler, MasterCard's vice-presi of promotions. It's a shift from the when marketers warily viewed pro tions as something that would d brand equity and encourage consume shop for deals. Says Heffler: "Promo has become a backbone of marketing

"ONE VOICE." For some brands, pro tions are taking the lead. Cigarette c panies have increasingly been using motions such as "Winston Weekend" "Marlboro Country Store"—in w smokers exchange proofs of purch for apparel and other items—to tal smokers. Frito-Lay Inc., meantime rolling all its marketing dol for Fritos-brand corn chips summer into sponsoring co try crooner Reba McEnti concert tour. The PepsiCo figures big TV campaigns fine for such superbrands Doritos and Lay's. But for tos, which doesn't comman megabudget, the sponsorshi a better way to reach its market.

Marketers say the shift gan in the 1990-91 downtu profit pressures and value-m ed shoppers forced compan to focus on keeping cash re ters ringing. Those for haven't abated. "It is very d cult to talk about brand imag to a guy who's laying off 10,0 employees this week," says vid A. Fowler, chief creative ficer at DDB Needham, Da Group, an agency that wo both in ads and promotions.

As marketers have focu on promotions, they have started to the grab bag of tactics to build brand much the same way they did with adv tising: to craft a new image, reinfo an existing one, or reach out to pr pects. Today, many argue that the old line between advertising and pro tions—which set agencies and promot agencies in competition marketers' budgets—is relevant. The priority is "speak to consumers w one voice," says Dean Barrett, vice-president marketing for McDonal Barrett says tie-ins films, sports, and oth properties are part o

COKE PONIES, BEDROCK EATS
This summer, Coke will give away 200 red Ford Mustangs, and celluloid stone-age diners will drive into "RocDonald's"



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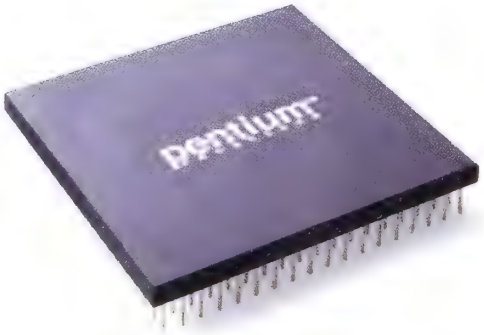

(Actual size.)

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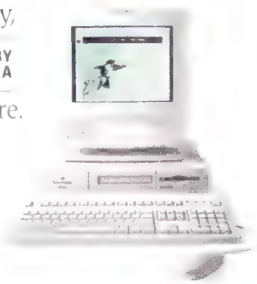

MOTOROLA

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larger strategy to link the brand to sports and families.

Marketers call the result "integrated marketing." But like "synergy," another popular word in marketing, it's mostly a euphemism for efficiency. Take Barq's. "We can't begin to compete with the big spenders in terms of building image," says Walters. So he looks for promotions "with attitude" to create a buzz, especially among kids and teens. After the Soviet Union fell, Barq's bought two tons of Soviet buttons, pins, and other memorabilia and gave them away in a "Soviet Union Going Out of Business" promotion.

That's small potatoes compared with McDonald's *Flintstones* program. The fast-food chain is not only piggybacking the film but negotiated a place in it, as "RocDonald's." The chain views the movie role as image-building. McDonald's also got a spot in the trailer, giving it two months to prime the pump for its promotional campaign. "We don't just want to do promotions," says Barrett. "We want to be integrated into the property."

STRANGE TERRITORY. Consumers seem to be buying in. McDonald's has been outperforming the category, according to researcher Technomic Inc. Sales rose 7.1%, to $14.2 billion, last year vs. 6.6% for the fast-food industry. MasterCard's shift to a promotional strategy stressing rebates and discounts has helped it end a five-year share slide and rebound two points, to 28.9%, according to *Credit Card News*.

MasterCard is turning MasterValues into a tool to segment consumer groups. Beyond its regular summer and winter MasterValues promotions, it has aimed promotions at business-card holders, college students, and gold-card customers. It has tailored programs to individual malls, and it has also creating customized programs for individual banks to help them better target customers.

In their quest to beat a new path to consumers, some marketers are planting their flag in strange territory. Offers for 10 or so minutes of free long-distance service from MCI Communications Corp., for example, have popped up in recent months on cans of Crystal Light powdered soft drinks, Taster's Choice coffee, and boxes of Keebler cookies and crackers. Angela O. Dunlap, MCI president for consumer markets, says the company views the tie-ins as "another channel for us to get out and tell people about MCI."

Cookie boxes as an ad medium for phone service? "The world has turned," says adman Fowler. He encourages his staff to view promotions as a challenge every bit as big as TV ads. And if that doesn't work? He reminds them that the more media they can communicate in, the more secure their careers will be.

By Jonathan Berry, with Lori Bongiorno, in New York

IT'S NEW. IT'S IMPROVED. WHO NEEDS IT?

Medical tech's credo: Breakthroughs had better be cost-effectiv

GE'S ULTRASOUND: AS HOSPITALS CUT BACK, MAKERS ARE EMPHASIZING LOW-COST LINES

Robert J. Gallagher remembers two years ago, when investors were constantly calling his company, Acuson Corp., a maker of ultrasound equipment in Mountain View, Calif. Gallagher, the chief financial officer, would field questions from those seeking big returns from fast-growing technology firms. Then, "they just stopped calling," he says. "My phone volume is down by a factor of 10."

The specter of an overhaul of the nation's health-care system is weighing heavily on the $42 billion medical technology industry. At Acuson, sales last year tumbled 14%, to $295 million, as hospitals cut back purchases. Profits plunged 90%. U. S. Surgical Corp. is mothballing plants, freezing wages, and laying off workers after a $139 million loss in 1993. And even giants are not immune: General Electric Co.'s $3.6 billion medical equipment arm faces a 10% slump in U. S. business this year, analysts say, as health-care providers slow purchases of high-priced gear such as magnetic resonance imaging (MRI) machines. "The uncertainty around [hea reform] is hurting the entire industr says Frank M. Fischer, CEO of Ventri Inc., a $25 million maker of implanta defibrillators that calm irregularly be ing hearts.

FAT MARGINS. It isn't just Bill and H lary who are giving the industry angi however. Even before Washington tempts reform, the industry is bei transformed by a profound shift in t marketplace. For decades, equipme sales were driven almost entirely technological advances, as neither sup ers nor buyers worried about costs: Ir vidual doctors and hospitals blith passed those on. "We were always warded for introducing whiz-bang te nology at a rapid pace," says Cynth Danaher, imaging systems manager Hewlett-Packard Co. Moreover, the Fd & Drug Administration seemed willi to approve new technologies rapidly.

That model has collapsed with s prising speed. Increasingly, the prima buyers of medical equipment are co conscious groups that buy gear or d

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tate decisions for hundreds of doctors and dozens of hospitals. On the front lines are people like Mary Ann Richardson. As director of materials management for HAPSCO Purchasing Services Cooperative in Blue Bell, Pa., she tries to ratchet down prices. Recently, she requested bids on pacemakers on behalf of 23 hospitals. "When you're paying $6,000 for a pacemaker and you're looking at saving 30%, that's significant," she says. When operating-room-materials manager Jan Graham joined Pottstown (Pa.) Memorial Medical Center in 1990, the intra-ocular replacement lenses used in cataract surgery sold for $400 each. "Now, we're down to about $100," she says.

The new power of corporate purchasers is also altering the way everything from MRI machines to pacemakers are made. As it designs new ultrasound equipment, Hewlett-Packard's imaging division in Andover, Mass., now routinely consults with insurers and corporate health-care buyers on what they're willing to pay for improvements. "We're asking, 'What is this worth to you?'" Danaher says. "We now view the payers as our customers, too."

That shift has led some major players to rethink business plans. GE has been a minor competitor in the ultrasound market, which is dominated by companies such as Acuson. Instead, GE emphasized higher-ticket computerized tomography (CT) and MRI, in which it was the leader. But as hospitals have cut back purchases of these $1 million machines, GE is devoting more resources to lower-cost lines. It has spent $100 million developing a $200,000 digital ultrasound machine that can be upgraded for future advances in 3-D imaging. Manufacturers also are courting new markets. GE expects its sales in Asia to jump 45% this year, to $1 billion, as those economies build a medical infrastructure. Overall, America's trade surplus in medical products will surge 28%, to $6 billion, by 1995, predicts Salomon Brothers Inc. analyst Margo L. Vignola.

ON FURLOUGH. Companies that fail to adapt do so at their peril. Take U. S. Surgical. The $1 billion Norwalk (Conn.) company, which makes small instruments used in minimally invasive surgery, saw its sales tumble 25% in the second quarter of 1993 and 32% in the third quarter. Long dependent on surgeons to approve the purchase of its products, Surgical was blindsided when the buying decision shifted to administrators and consultants, who began demanding comparisons with products from Johnson & Johnson. That slowed purchases—and sent Surgical's inventories soaring. The company has furloughed 20% of its employees and cut $150 million, or 20%, from capital expenditures.

Cheaper products, lower prices, and thinner margins are changing the financial dynamics of the industry. "In the past, you could assume from 2% to 3% [annual growth] in price, 3% to 5% in volume, and then with new products, you were looking at a revenue stream growing in the double digits," recalls Earle L. Parker, treasurer at C. R. Bard Inc., a Murray Hill (N. J.) maker of catheters for heart and urological medicine. "You can't assume that anymore."

So venture capitalists have grown skittish. From 1988 to 1992, investment in small and developing medical technology companies surged 42%, to $426 million, according to the Health Care Technology Institute. But a recent survey of venture-capital firms found that fewer medical technology companies were receiving capital. Falling stock prices were partly to blame: They make it harder to recoup investments through initial public offerings. But "the No. 1 concern is the FDA," which is taking longer on product approvals, says Casey J. McGlynn, a Palo Alto (Calif.) lawyer who sits on the boards of several medical-device companies.

In fact, in the wake of highly publicized problems with heart valves and breast implants, the FDA is approaching new devices with greater caution. In 1988, it took 78 days on average to get new versions of existing products approved; by 1992, that had stretched to 126 days. Similarly, the FDA granted market approval—the go-ahead to be marketing—for 46 new devices in 19 in 1992, it O. K.'d just 12. Moreover, number of applications dropped, as c panies slowed development in the fac more oversight.

HOME BLOOD TESTS. The long lead t for new products means companies n more capital to survive, says Rus Hirsch, a partner at Mayfield Fund Menlo Park (Calif.) venture-cap group. He adds: "We're looking for credibly novel new devices." One re investment: Focal Inc., a Cambri (Mass.) company that uses degradable polymers to vent surgical scarring.

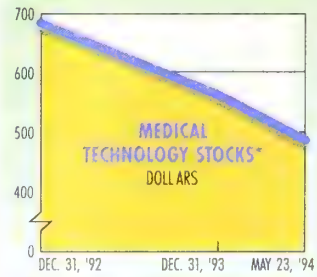
For venture capitalists established companies al medical technology that trim or eliminate expens hospital stays is a top prio There's a growing empha for example, on so-ca point-of-care technologies t can be used at home or wh ever health problems oc Similar in concept to ho pregnancy tests are blood-t kits that detect the chemical signs high cholesterol and heart disease. Sp tral Diagnostics in Toronto is develop a blood-analysis device as small a credit card that paramedics could to determine whether a patient is suf ing from angina or a heart attack- that the appropriate drugs can be ministered immediately.

Executives such as Ventritex' Fisc believe the focus on cutting costs only increase demand for high-tech so tions. The Ventritex defibrillator avo the need for open-chest surgery by lizing veins in the chest to place called "leads" on the patient's heart shortens hospital stays from more tha week to a couple of days and boast a 97% survival rate for patients af three years. "We will do fine regardl of the environment that comes forwa says Fischer.

Maybe. But the days are gone wh every little advance in technolo brought increased profit to the ind try. "Health care is starting to look l a lot of other industries," says Carol Popper, medical director for Bec Dickinson & Co.'s diagnostic-imag business. That means those who want prosper will have to be nimble comp tors whose products save money as w as lives.

By Tim Smart in New Haven, w Joan O'C. Hamilton in San Francisco a Susan Chandler in Chicago

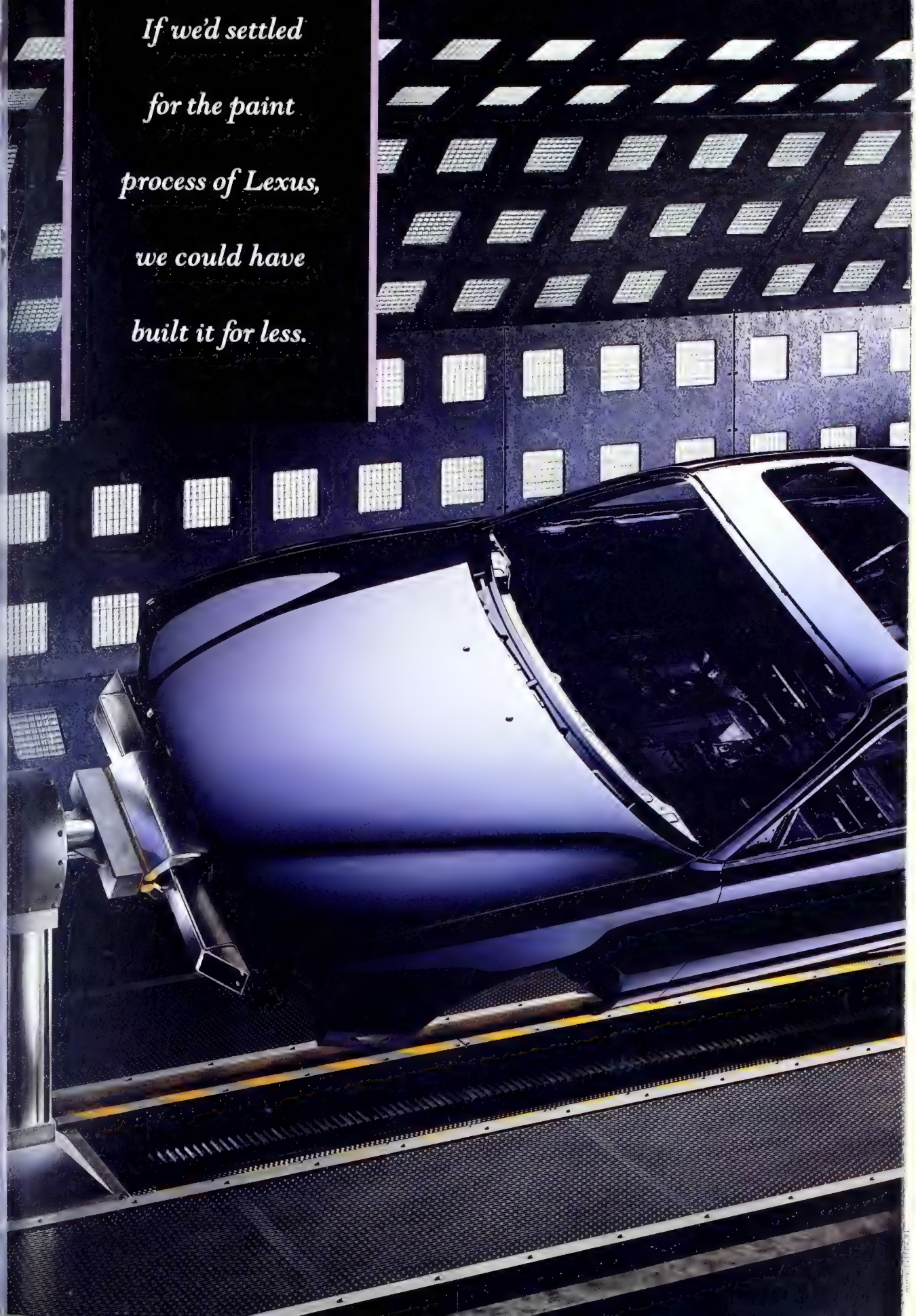
MEDICAL TECHNOLOGY STOCKS HAVE TANKED



STOCK CLOSES:	DEC. 31, '92	MAY 23, '94
VENTRITEX	37 3/4	23 1/4
ST. JUDE MEDICAL	42	26 3/4
U.S. SURGICAL	68 3/4	17 3/4
C. R. BARD	33 1/8	24 1/2
MEDTRONIC	95 1/4	76

*AGGREGATE PERFORMANCE OF A BASKET OF 20 MEDICAL TECHNOLOGY STOCKS DATA: FURMAN SELZ INC., BUSINESS WEEK

After problems with breast implants and heart valves, the FDA is getting stingier with O.K.'s for new devices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we could have
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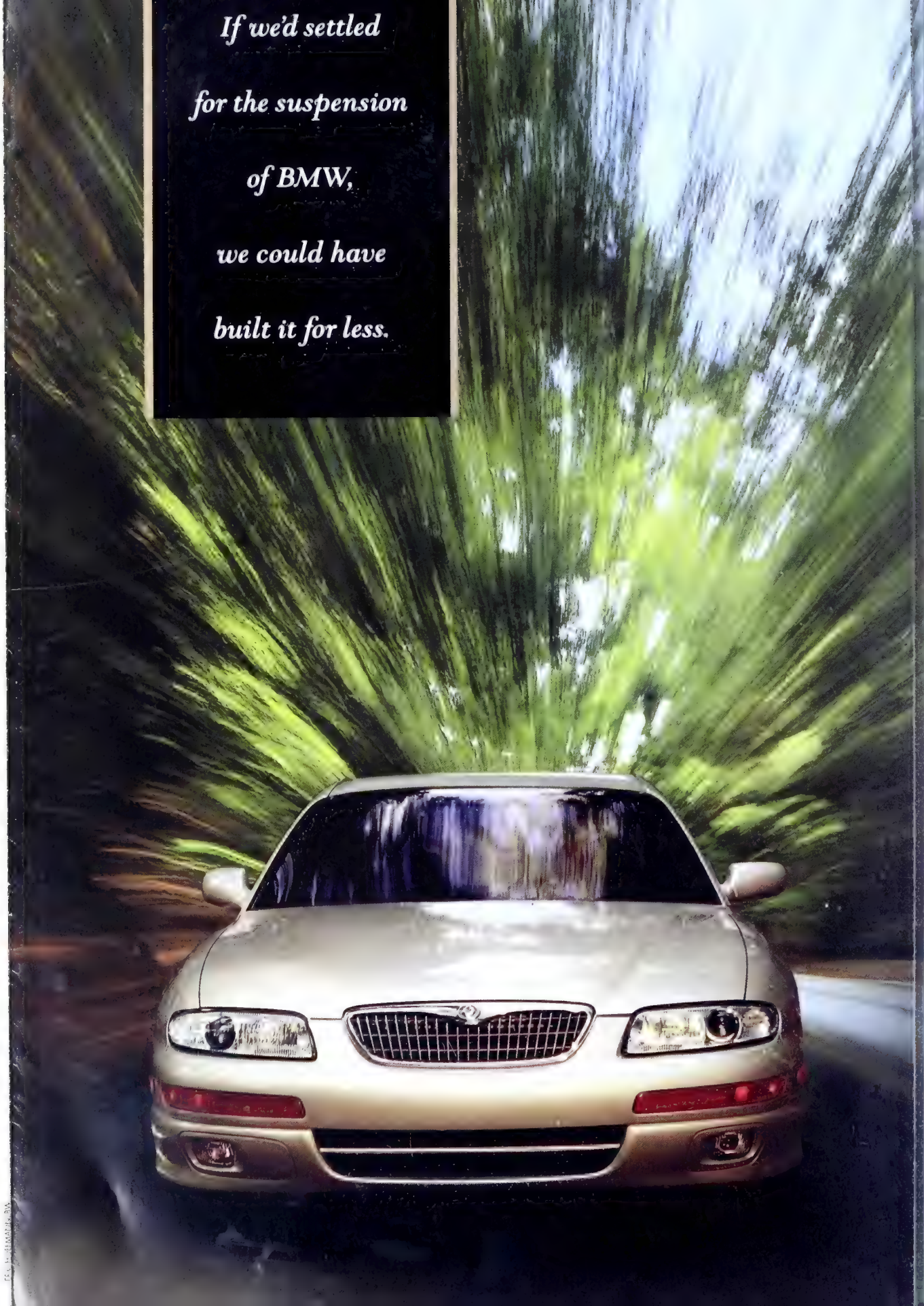
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for the suspension
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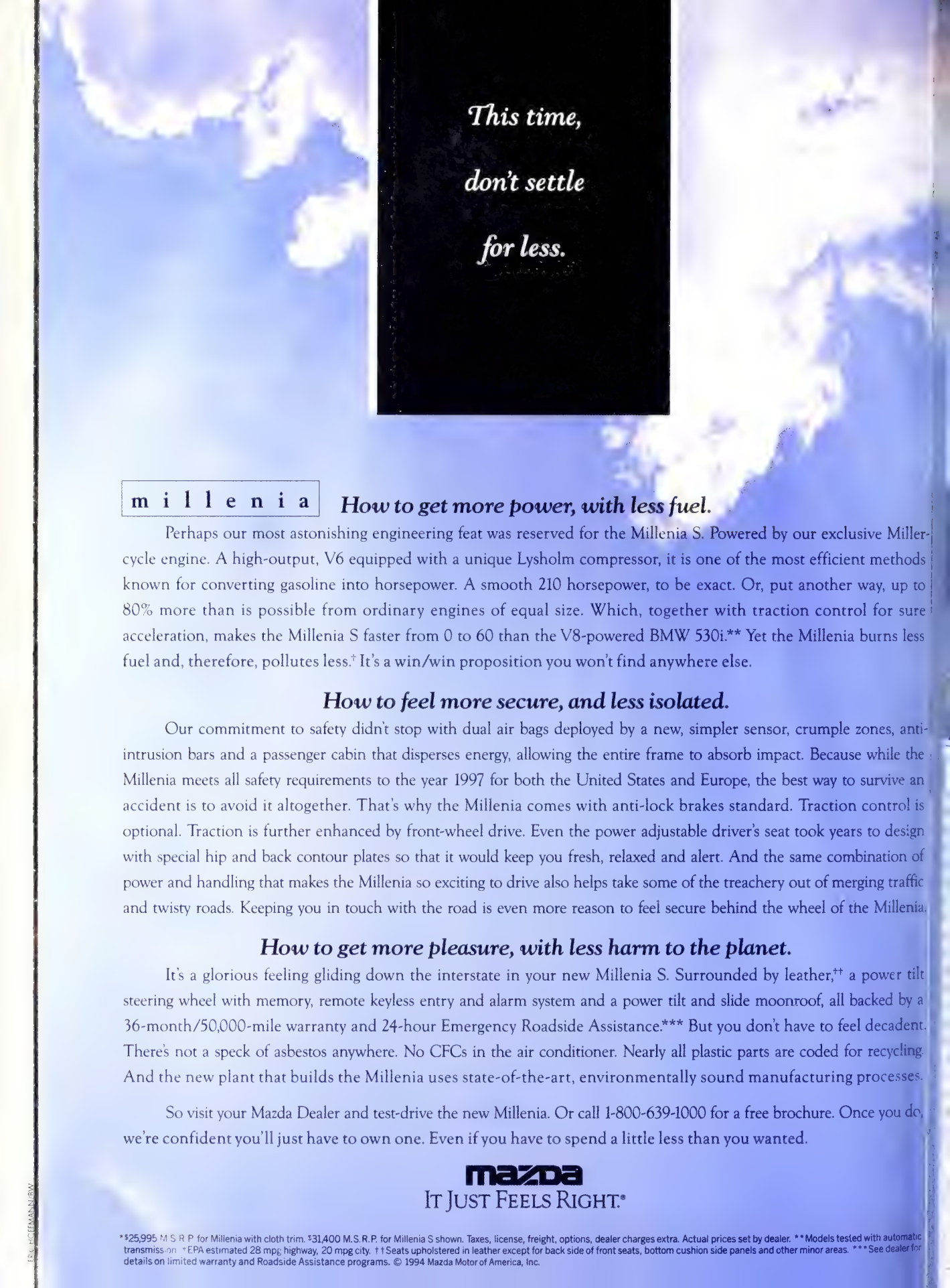

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FRC HOFFMANN/BW

ERNANCE

TALES FROM THE BOARDROOM WARS

alPERS' Hanson on his long fight for shareholders' rights

HANSON: HELP FROM SURPRISING QUARTERS

ale M. Hanson sinks into a couch in Anaheim, Calif.'s Hyatt Regency Hotel. The normally upchief executive of the $80 billion rnia Public Employees' Retirement em is subdued, even melancholy. than 24 hours before, on May 16, on had informed the CalPERS board, ing here, that he was quitting. Afeven years of fighting for manageaccountability and boardroom re—not to mention managing a fund 1 million beneficiaries—America's prominent activist shareholder was ng to become CEO of a new investcompany. Now, Hanson starts to e what he saw at the revolution. d revolution it At one company another, the balof power shifted vestors forced the r of CEOs or other ges. One tale s how rebuff d into respect. In ary, 1990, when n wrote General 's Corp.'s directors to complain about its performance, then-Chief Executive Roger B. Smith—without consulting the board—told the fund to mind its own business. That August, when Hanson wrote Smith's successor, Robert C. Stempel, requesting a meeting, General Counsel Harry J. Pearce called back asking when. By November, 1992, when John F. Smith Jr. replaced the ousted Stempel, Pearce was inviting Hanson to visit Smith.

Hanson was in the thick of headline-making battles at Westinghouse, Sears, American Express, IBM, Advanced Micro Devices, and Time Warner, plus many more events behind the scenes. All told, he has met with 65 CEOs of 56 companies and held many talks with outside directors.

As Hanson tells it, CalPERS' campaign was studded with lucky accidents, mistakes, and embarrassing moments. He reveals how the seminal idea of writing to GM happened to come up during secret talks in 1989 with Business Roundtable members at Treetops, the Champion International Corp. mansion in Stamford, Conn., where Mike Todd proposed to Elizabeth Taylor. He recounts how once, as he escorted Paul E. Lego, then CEO of Westinghouse Electric Corp., from CalPERS' Sacramento headquarters, they ran into American Express CEO James D. Robinson III in the waiting room (both resigned under pressure within months); how Roger Smith, when ordered by GM's board to meet Hanson, pounded the table and blamed the carmaker's problems on the Japanese, lawyers, and unions; and how Texaco Inc. chief James W. Kinnear phoned him in Wisconsin one weekend and, mistaking the voice of Hanson's 81-year-old father for his, charged the retired dry cleaner with betrayal.

Hanson says, too, that his mission would never have been accomplished without help from CEOs such as TRW Inc.'s Joseph T. Gorman and, eventually, Kinnear. "We know he convinced others to talk to us."

At first, Hanson and CalPERS General Counsel Richard H. Koppes, his chief accomplice, needed that help. In the 1980s, "if you were not Forstmann Little or KKR or Carl Icahn, shareholders were a joke," Hanson recalls. "We would have never guessed where we are today."

Getting there brought out critics. Some say CalPERS won its mammoth reputation because of its size, not Hanson. Others have blasted Hanson as a publicity hound eager for a political career. Still others nicknamed him "two-dinner Dale," claiming that CEOs could buy him off with a little schmoozing.

WATCHDOGS. Hanson, however, has no illusions that a revolution is a dinner party. True, some CEOs do stonewall, such as Boise Cascade's John B. Fery. "I don't know if that company will ever be saved," Hanson says. While Boise maintains that it's on track to profitability, based on price increases in its key paper grades, CalPERS would call Boise a work in progress.

By Hanson's account, CalPERS has let only one chief executive off the hook: Champion's Andrew C. Sigler. And that, Hanson says, was because Sigler has two big watchdogs in shareholders Lau-

ON ROGER B. SMITH, GM:

"He was able to talk and say nothing to us, which was quite a talent."

ON JAMES E. PRESTON, AVON PRODUCTS:

"He's pure vanilla . . . very decent, very standup. His word was basically his bond to us."

rence A. Tisch and Warren E. Buffett.

Hanson came to be a governance kingpin by accident. When he joined CalPERS in April, 1987, the fund had started, willy-nilly, to file resolutions against poison pills and for confidential proxy voting. Hanson didn't plan to pay much attention. Koppes, though, had just returned from McDonald's Corp.'s annual meeting, where he fruitlessly advocated an anti-poison-pill measure while management announced record profits and a stock split. "Rich took me aside, and said, 'It's not working; there's no focus,'" Hanson recalls.

The two decided to concentrate on poor performers, heeding advice from the corporate world—most notably from General Mills CEO Bruce Atwater and New York attorney Ira M. Millstein, an adviser to the Business Roundtable. CalPERS began devising a system to choose a dozen targets a year.

Meanwhile, more pressing matters surfaced. In spring, 1988, raider Carl C. Icahn made a run at Texaco. CEO Kinnear sought support from shareholders, and Hanson, doubting Icahn's financing, agreed to vote with management. Texaco won—and Hanson wanted something: shareholder input on directors. Nothing came of two meetings with Kinnear that summer and fall. "It was clear that they took us to the dance but they didn't want to take us home," Hanson says.

Over Thanksgiving weekend, he and Koppes decided to file a resolution seeking creation of a shareholders' advisory committee. Then, they put out a press release. "We don't believe in shareholder committees," Hanson confesses. "We needed to get their attention." They did. That's when Kinnear gave Hanson's father an earful. Kinnear says he talked a lot with Hanson but doesn't recall that incident. In the end, Texaco agreed to consult with shareholders on director qualifications.

GETTING LUCKY. CalPERS' next leap forward came the following year at TRW. Without yet knowing how to define poor performance, it filed a resolution calling for a shareholders' committee and wrote the company asking for a meeting. "It was a screwup," Hanson admits. "TRW had suffered just a one-year blip in its airbag business."

Even so, smiles Hanson, "we got lucky." Although neither Hanson nor Koppes expected to meet with the CEO, Gorman invited them to dinner at TRW's guest house, near its Cleveland headquarters. The discussion went so well that Hanson decided to ask to meet some TRW directors. Surprisingly, Gorman didn't hesitate. A few months later, when the duo went back to Ohio, their luck held. Because of a family emergency, Gorman couldn't attend. But he told them to see the directors without him. "That's commonplace today, but it wasn't in 1989," Hanson says. "Joe had real courage."

TRW proved key: "We learned the importance of meeting with directors. We wanted to see if there were any lights on—were they representing us and was there any accountability."

KOPPES: HANSON'S PARTNER IN THE BATTLE

If its lesson on directors started with a break, CalPERS' most visible victory began with an offhand question. Late in 1988, eager to thwart the assault on CEO power, the Business Roundtable's governance task force—headed by Sigler and including Atwater—invited a few pension-fund managers to dinner in New York. It went nowhere. "I left at least 10 times for a smoke because everyone was making speeches and no one was talking," Hanson recalls. Still, the same cast agreed to two more sessions at Treetops.

These, too, produced little substance. At one of the talks in fall, 1989, Koppes asked if there was any company everyone could agree was poorly run, any company where the board was not doing a good job. "GM," the CEO piped up—touching off a discussion of what could be done. Millstein proposed that shareholders write a letter—though no one volunteered. On the plane back to California, Koppes told Hanson he wanted to do it. "Sure, go ahead," Hanson said.

MILESTONES. The dominos soon began falling: GM's aroused board ordered Roger Smith to meet with Hanson; it subsequently fired Stempel and named director John G. Smale chairman; Jack Smith became CEO; and this March, the board issued a 28-point governance credo. CalPERS promptly sent copies of GM's guidelines to the CEOs of 200 top companies, asking for a response by Aug. 1.

There were other milestones. In August, 1991, after CalPERS protested CEO Rand V. Araskog's hefty pay package by seeking votes against directors, Araskog flew to Sacramento. "He said, 'I'm here because my board told me to get out here... they don't want me to be your poster boy,'" Hanson says. It was clear to us that the no vote had made an impression"—though CalPERS got just 1.5%, half of that its own stock.

There was also Avon Products, where CalPERS helped start regular meetings with big shareholders; Lockheed, which now consults big shareholders on directors and business issues; and USX, where one director admitted that the board should have questioned the $7 purchase of Piedmont. But according to Hanson, the director said that back then, speaking up "was equivalent to flatulence in church." Now, thanks to Hanson and other activists, more directors are asking questions. "Dale has won great respect in the corporate community," says Atwater. "There's pretty good agreement on these issues."

Hanson now wants to "institutionalize some of the gains we've gotten." Hence those 200 letters. "It's to get directors thinking about what they do and why they do it." Hanson's last day is June 30; he doesn't wants his successor to have to teach refresher courses in Corporate Governance 101.

By Judith H. Dobrzynski in Anaheim

ON JOHN B. FERY, BOISE CASCADE:

"He talks a good game, but we never got anything out of the company. . . . I don't know if that company will ever be saved."

ON GEORGE M. FISHER, EASTMAN KODAK:

"After meeting with Fisher, you walk away feeling that your money is in good hands with that stock. You know he has immersed himself in that organization."

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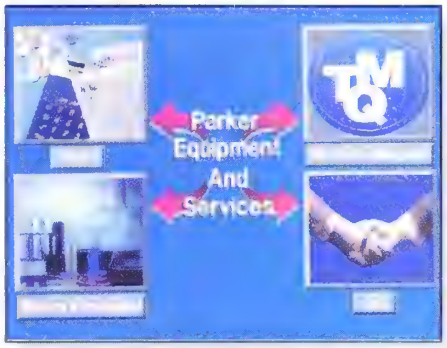

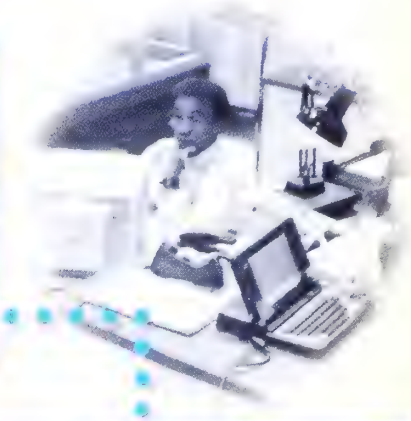

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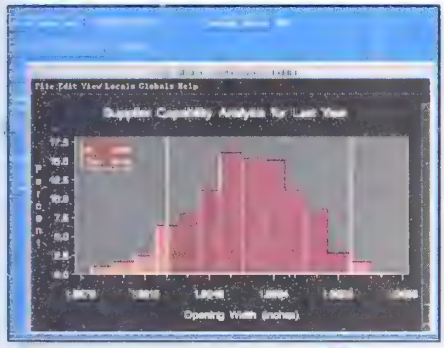

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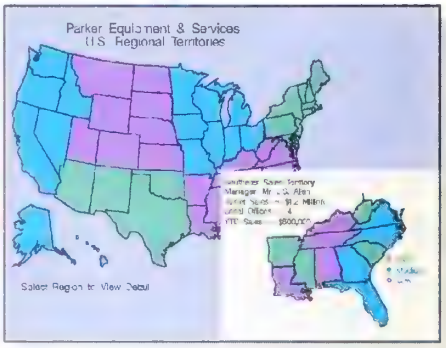

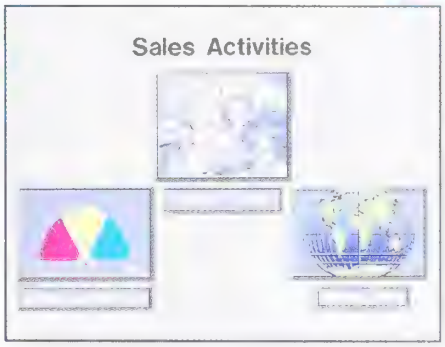

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Winners

The Best Product Designs of the Year

Lego-like computers. Intuitive CD-ROMs for virtual conferencing. Pioneering personal digital assistants. Cool tools for cars and the shop. Mundane, yet revolutionary sheds. Wireless stereos. The U. S. Holocaust Memorial Museum.

The winners of the 1994 Industrial Design Excellence Awards (IDEA), juried by the Industrial Designers Society of America and sponsored by BUSINESS WEEK, highlight the ongoing strength of American industrial design and point the way for the evolution of product development.

This year's entries were full of new trends: the growth of software design that offers graphical user interfaces (GUIs or "gooies") to make complex products easier to use; the rise of digital modularity that allows buyers to continually update their computers, rather than junking them every three or four years; a surge in design quality for everyday consumer products, from kids' furniture to tape measures; the design of entirely new product categories, from PDAs to heads-up displays for TVs; and the continued transfer of defense technology to consumer products. Gone are past fads such as magenta-colored desktop computers full of swirling curves.

MICROSOFT'S MICROPHONE PUTS YOU ON SPEAKING TERMS WITH YOUR COMPUTER

OPEN SPLIT. Gone, too, is jury consensus. Trench warfare broke out in 1994, and a mile-wide split sundered the eight-person IDSA jury. The long-simmering feud between design pragmatists, who focus on functionality and marketability, and design aesthetes, who prefer the realm of form and intellect, spilled over into the actual judging proces "Redneck design" and "bubba design" we epithets thrown at practical consumer pro ucts designed for the masses. "Aesthetica pleasing" and "classical looks" were terms served for products that looked like scu ture or that got into the Museum of Mode Art's design collection. The jury battled itself virtually every gold, silver, and bronze award "The artsy crowd waged a war against what th considered common products for people," says juror N Zeller, president of Zelco Industries. "It was very controv sial," adds Zeller, whose own handy designs include t best-selling Itty Bitty Book Light. "Jurors shot down a lot really good designs, esp cially of consumer product

The result? Many pro ucts were demoted fr golds to silvers and bro es—or to no award at all— the basis of being too "co mercial" and not aesthe enough. Products emb zoned with company log and model names were esp cially bludgeoned. Appe ance was often valued more highly than such tributes as design for mar facturability, use of in pensive materials, and tra parency of purpose—desp the efforts of Herb Tyrnau professor in the design partment of California State University at Long Beach a leader of the pragmatist faction. "I have fought my whole l for the separation between artists and designers," he sa "For years, designers who counted themselves as artis

REINVENTING THE WHEEL: SPINERGIES REV-X IS LIGHTER, STRONGER, FASTER—WITH KILLER GRAPHICS, TOO

demeaned the profession and made it vulnerable to being evaluated on superficial, personal aesthetic criteria."

The clash was most intense when it e to the shed. Rubbermaid Inc. came up with a fresh —take the traditional wood or metal outdoor product recast it in a material that doesn't rust, dry-rot, or ter. It used blow-molding, a sophisticated plastic manuring process, in an innovative manner and came up a product that gave consumers real value. But it wasn't tly beautiful. "The shed was as handsome as a toad," Tyrnauer, "but it was an excellent design because it did . a shed was supposed to do."

LE OF THE SHED. Lella Vignelli, president of Vignelli De-, a New York graphics design firm, disagreed. "I felt lesign was quite poor as aesthetics," she says. "The did not rust, did not rot, and cost little," she adds. .. but so what? It looks horrible. It was a good exam- f the main contrast on the jury—between mere util- s. illuminated design." Vignelli refused to put her on a gold medal for the shed. "I fought valiantly for be a gold," says Tyrnauer. And lost. In the end, the received a bronze.

e debate spilled over into what may be today's hottest n discipline: user-interface software. This isn't just for uter programs but for a host of products that are ed with digital electron-

KIN-DER-LINK FURNITURE FOR KIDS WILL SOON BE ON DISPLAY AT THE MUSEUM OF MODERN ART

A SUN-FADED '87 RED MUSTANG: AKZO'S MACBETH AUTOMATCH-(G)IC MATCHES THE RIGHT PAINT

ics—everything from telephones, camcorders, tools, and copiers to medical equipment. The software that presents the functions of these often complex products is becoming a key way for manufacturers to differentiate their machines. In fact, with so many products at technological parity, the presentation of how-to-use-it information is increasingly the game to win in sales. If a product doesn't "display itself" immediately and provide simple, intuitive clues to its operation, it won't sell.

MAKE-UP CLASS. The lesson also applies to computer software. Take the pair of bronze-winning CD-ROMs, one for Apple Computer Inc., the other for NASA. An Austin graphics-design firm, Human Code, designed the interactive interface of both products. The Virtual Conference Engine for Apple allows anyone who missed a two-day conference on new media to "attend" the proceedings later.

PHOTOGRAPHS BY (UPPER LEFT) PETER BRENNINGER (LOWER RIGHT) D. HAMERMAN

Despite the complexity of the data, everything on the conference disk is just one or two clicks away. "From a functional point of view, the product was really good because it had a one-layer interface, not the several layers you often have in software interfaces," says James Shook, industrial-design manager at Tandem Computers Inc. Shook recommended Apple's CD-ROM for a gold, but the "esthetics police" thought it too "busy" and busted it down.

There were other kinds of interfaces that won awards as well. The bronze award winner Windows Sound System Microphone by Microsoft Corp. is an audio interface that allows a person to orally command a computer to carry out tasks currently done with a keyboard or mouse. And the silver award winner Virtual Vision Inc. Sport 200 is a plastic heads-up display worn like goggles that lets sports fans see an instant TV replay while watching the game.

LEGAL APPROACH. Then there is the ultimate winner in designing complex information for people: the Holocaust Memorial Museum in Washington. Making the Holocaust understandable without sensationalizing or trivializing it was a hard job. The strategy of Ralph Appelbaum was to organize the information and present it to the viewer as if building a legal case. Data are offered providing irrefutable proof of what took place. The Holocaust Museum Memorial won a gold.

WINNERS FOR 1994...

Here are many of the top design firms and corporations whose products won Industrial Design Excellence Awards in 1994:

DESIGN FIRMS	AWARDS			
	GOLD	SILVER	BRONZE	TOTAL
ZIBA DESIGN	1	1	1	3
METAPHASE DESIGN		2	1	3
SG HAUSER			3	3
HENRY DREYFUSS	2			2
DESIGN CENTRAL	1		1	2
FITCH	1		1	2
PARADIGM:DESIGN	1		1	2
KMH DESIGN		1	1	2
LUNAR DESIGN		1	1	2
PALO ALTO DESIGN		1	1	2
FROGDESIGN			2	2
HUMAN CODE			2	2
STRATOS PRODUCT DEVELOPMENT			2	2
BURDICK DESIGN			2	2
CORPORATIONS				
MICROSOFT		1	2	3
RUBBERMAID			3	3
FISKARS	1		1	2
GENERAL MOTORS		1	1	2

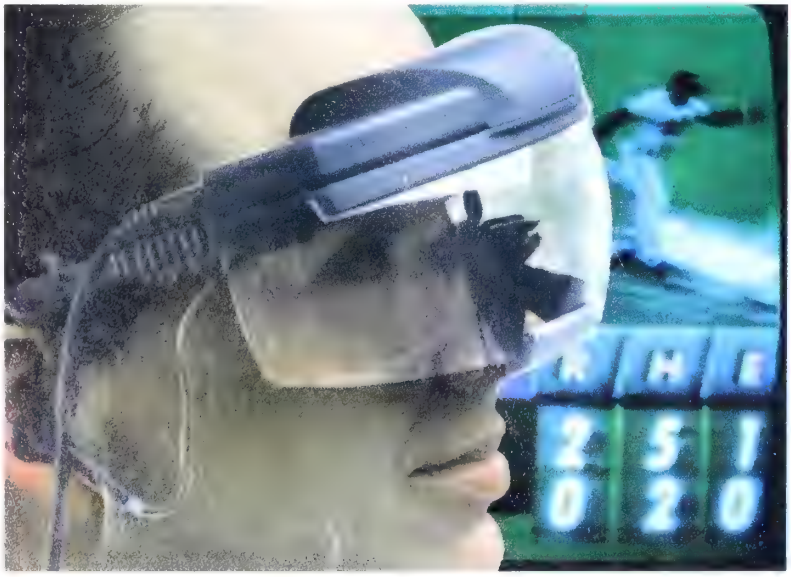
DATA INDUSTRIAL DESIGNERS SOCIETY OF AMERICA

WHO NEEDS MATH? TAPE MATE LETS EVEN ENGLISH MAJORS FEEL HANDY

Motorola Inc.'s silver award-w ning Series 900 may help to redefi computers. Several award-winni computer designs this year w modular, achieving a goal that co puter makers have talked of years. The 900 carries it off in wa that are both functionally and a thetically pleasing. By doing aw with miles of cords and cables a designing truly snap-in componen Motorola and Palo Alto Design Gro Inc. created a system that can be sembled without even having to us screwdriver. The pieces come together in an attractive pa age that provides flexibility, easy expansion, and savings

One of the great surprises in this year's IDEA contest the increasing strength of consumer-product design. For t past five years, computers and medical equipment ha been the design leaders in America. Now, it seems, the c ting edge may be passing back to consumer products. Po roid Corp.'s Vision Date, for example, won a gold by solvi the one great problem of instant photograph what to do with the wet pictures. It stores th in the camera for you. And the SoundEffe Home Theater Audio System designed by Fit Inc. for JBL Consumer Products Inc. is an au system whose components can be placed in room without connecting wires.

The Kin-der-link bent-plywood furniture kids is an innovative way of providing chairs, bles, and benches by simply linking one ba stool to form multiple seating. It assembles a stacks easily. Its classic style and the fact that t product, by Skools Inc. of New York, was cepted into the permanent collection of the M seum of Modern Art in Manhattan no do helped the product win a gold.



SPORTS ALERT: SPORT 200 LETS YOU WATCH THE GAME AND THE TV REPLAY

In contrast, the T Mate by River Stud in Aspen, Colo., wa

)ba tool" that won a bronze. The simple calculator piggy-
cs onto the ubiquitous tape measure, boosting its useful-
i. The Tape Mate calculates surfaces down to fractions of
quare inch. Measure the length and width of a room,
it figures out the wood needed for a new floor.

he rev-X bicycle wheel is as high tech as you can get. It's
e of carbon-fiber-Kevlon composite, a material designed
ise in military aircraft that's not only lighter and strong-
nan metal but also looks terrific. Clifford Selbert Design
'ambridge, Mass., did it for Spinergy Inc. in Wilton,
1. A silver.

aking the gold in business and industrial products was
high-tech Macbeth Automatch(g)ic, designed by Group
· Design for Akzo Instruments. It's a handheld color-
measuring instrument that electronically determines the exact shade of a car's color and automatically selects a matching paint. Get a dent and only the spot has to be painted, not the whole car.

LESS WONDERS: NO NEED TO E THE FURNITURE WITH JBL'S IDEFFECTS AUDIO SYSTEM

For home auto mechanics and hobbyists, Rubbermaid's new Auto Work Center is a roll-around tool chest that won't rust because it's made from injection-molded polypropylene. The bronze winner looks like it enjoys getting dirty.

1 PATTERN. Perhaps because of the infighting among
s, this year's results showed a markedly different pat-
from years past. For one thing, there was a far greater
sion of design-award winners in 1994. Rubbermaid and
soft received three each, General Motors and Fiskars
ered two apiece, and then there was a wide assort-
of companies
g one gold, sil-
or bronze. Last
Apple took
awards, Hew-
ackard and NCR
hree each, and
companies
two awards
e.

e same pattern
for the design
. Ziba, Meta-
, and SG Haus-
ssociates won
each, followed

MECHANIC'S HELPER: RUBBERMAID'S AUTO WORK CENTER WON'T RUST

by 11 shops with two apiece. In 1993, Ziba took seven awards, and five design firms won three each.

FAR LESS GOLD. Altogether, there were 714 entries in the IDEA awards in 1994, compared with 675 last year. Despite the larger number of submissions, there were a lot fewer winners—76, compared with 91. A number of jurors said that the split in the jury made it difficult to agree on winners, especially golds. Only 18 golds were awarded, compared with 31 in 1993, 24 silvers, compared with 26 last year, and 34 bronzes, the same as the previous year. To be eligible to enter the annual IDEA contest, American citizens and designers around the world who are IDSA members must have placed their designs into production between Jan. 1, 1992, and Feb. 22, 1994.

In the first part of the jurying, entrants are graded by a designer with specific expertise in the field. After the first cut, the jury as a whole convenes to discuss the remaining contestants. This year, debate and disagreement led to an unusual second all-jury meeting. In the process, many products were knocked down several rungs from gold to silver to bronze.

BUSINESS WEEK presents a detailed look at 10 gold, silver, and bronze medalists in the following pages. Each has its own tale to tell.

By Bruce Nussbaum in New York

...AND OVER THE LAST DECADE

Winning year after year takes dedication and smarts. These are the very best in recent years:

DESIGN FIRMS	1980-93	1994	TOTAL
IDEO	27	1	28
ZIBA DESIGN	20	3	23
FROGDESIGN	18	2	20
FITCH	17	2	19
LUNAR DESIGN	14	2	16
SG HAUSER	10	3	13
AMBASZ DESIGN	11		11
DESIGN CONTINUUM	11		11
GROUP FOUR	9	1	10
HENRY DREYFUSS	6	2	8
PARADIGM:DESIGN	5	2	7

CORPORATIONS	1980-93*	1994	TOTAL
GENERAL MOTORS	18	2	20
AT&T*	20		20
STEELCASE	16	1	17
APPLE COMPUTER	13	1	14
IBM	14		14
HERMAN MILLER	10	1	11
CHRYSLER	9	1	10
TEXAS INSTRUMENTS	8		8
FISHER-PRICE	6	1	7
BLACK & DECKER	6	1	7
HEWLETT-PACKARD	6	1	7
KNOLL	7		7
DIGITAL EQUIPMENT	7		7

*GLOBAL INFORMATION SOLUTIONS (FORMERLY NCR)
DATA: INDUSTRIAL DESIGNERS SOCIETY OF AMERICA

JEFF PHOTOGRAPH BY PETER KILE

THE HORROR SPEAKS FOR ITSELF

U.S. Holocaust Memorial Museum

Designer: Ralph Appelbaum Associates Inc.

The Treblinka railcar was a vexing problem. As Ralph Appelbaum designed the permanent exhibit at the U.S. Holocaust Memorial Museum in Washington, he planned to force visitors to walk through the type of railcar that took thousands of people to the notorious Treblinka concentration camp.

But a survivor of the camps who sat on the museum's advisory board balked. She vowed never to set foot in the car. To mollify her, Appelbaum moved a wall to offer an "escape" before the entrance to the train. When he explained the change, the survivor insisted on calling it a bypass. No one escaped the railcars, she said.

This was just one of numerous emotional minefields Appelbaum had to navigate during the five years he spent designing the three-story, 36,000-square-foot exhibition, which opened in April, 1993. His dilemma: creating an exhibit that didn't traumatize visitors but that adequately conveyed the horror.

Judges for the Industrial Designers Society of America think New York's Ralph Appelbaum Associates Inc. walked that fine line with nary a misstep. The exhibit is a "masterpiece of communication" that presents the history of the Holocaust "without ever trivializing, glorifying, or becoming sentimental," says Lella Vignelli, president of Vignelli

CITIZENS OF A TOWN WHO WERE PUT TO DEATH (ABOVE) A TREBLINKA RAILCAR (LEFT)

Designs, a judge in the co petition.

Appelbaum's strategy w to design the exhibit to e sent information as if w were building a case like lawyer: a step-by-step ac mulation of facts and e dence—from graphics o photos to historical film to age and artifacts—to prov irrefutable proof of the H ocaust. The atmospher are as compelling as the co lection: dim lighting, sp of glass, and steel suppo

have the impression of
in a black space," Vig-
says. "You just see
you need to see."
e design plays heavily
atial and physical per-
ns to enhance the mes-
Visitors to the exhibit
form a line, then are
d into a mock indus-
elevator—the first met-
ical link to the Jews,
homosexuals, Gypsies,
others who were
ed to the camps. Just
e the elevator door
on the fourth floor,
lectronic voice of an
can soldier who helped

free Buchenwald sets the tone for what's to come. "You can't imagine it," he says. "Things like that don't happen." The door opens up to a floor-to-ceiling picture of what the Allies saw when they entered the camps: piles of decaying corpses.

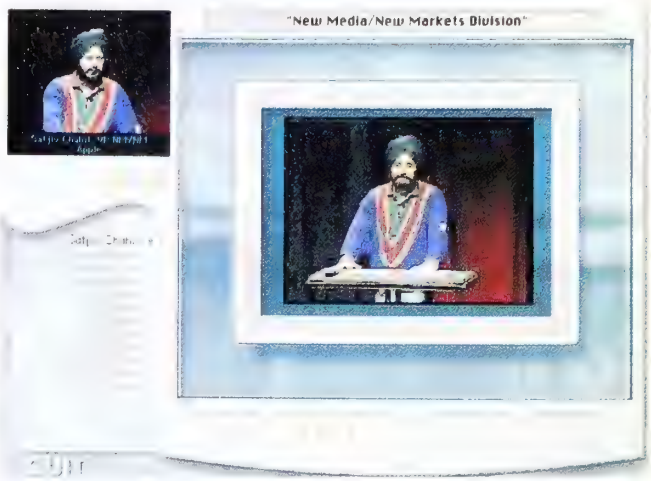
The third floor, called the Final Solution, details the fate of the Third Reich's victims. The floors and raw-concrete ceilings are unfinished to "evoke what was happening to people," Appelbaum says.

SURVIVAL TALES. The second floor, where the exhibit ends, is uplifting. It tells stories of those who rescued targets of the Nazis, of the Nuremberg trials, and of those who fled to safety. A large color screen offers oral histories from concentration-camp survivors.

The exhibit has met public as well as critical acclaim: The 1.3 million visitors the first year and their average three-hour stays exceeded projections. Appelbaum's success has emboldened others to propose museums about slavery and about U. S. camps for Japanese Americans during World War II—topics that before would not have been subjects for popular museums.

Presenting difficult subject matter that neither sensationalizes nor trivializes is an immense design problem. In so doing, the U. S. Holocaust Memorial Museum breaks ground.

By Stan Crock in Washington



MULTIMEDIA GUI: SOUNDS GOOEY–BUT IT'S NEAT

Apple Computer's Virtual Conference Engine

Designer: Human Code Inc.

On-line services, the Information Highway, multimedia. There's a torrent of digital information coming our way. But without improvements in the design of software interfaces, we may feel like we're drowning. Apple Computer Inc. recognizes that an intuitive "graphical user interface" (GUI, pronounced "gooey") is needed.

Apple had a neat way to test its ideas for a multimedia GUI: the text, graphics, audio, and video from a two-day conference it had sponsored on "new media." Why not repackage the information on a CD-ROM in a virtual conference that improves upon the original? It would allow people to skip back and forth between sessions and pore over background material at their own speed and with their own agenda.

At the heart of Apple's New Media in a New World CD-ROM is the Virtual Conference Engine software, this year's winner of an IDEA bronze award. Developed by Human Code Inc. in Austin, Tex., it veers from traditional GUIs that take many steps to navigate all the information.

All you do is roll the on-screen pointer down a list of the presenters and the corresponding pictures of the speakers change with the names. Click once, and the presentation begins, with the main screen showing graphics and charts emphasizing the speaker's points. You can listen to the speech as it was made or skip through the graphics.

Whether it's a CD-ROM, an interactive TV, or a "smart" appliance, human-interface software is increasingly critical to product usability. Human Code and Apple showed how to do it right.

By Paul M. Eng in New York

YOU'RE DOING THE QUART
GRAB THE EAST COAST F
THE PROFIT CHART, AND TU
WAIT, DID YOU JUST DO

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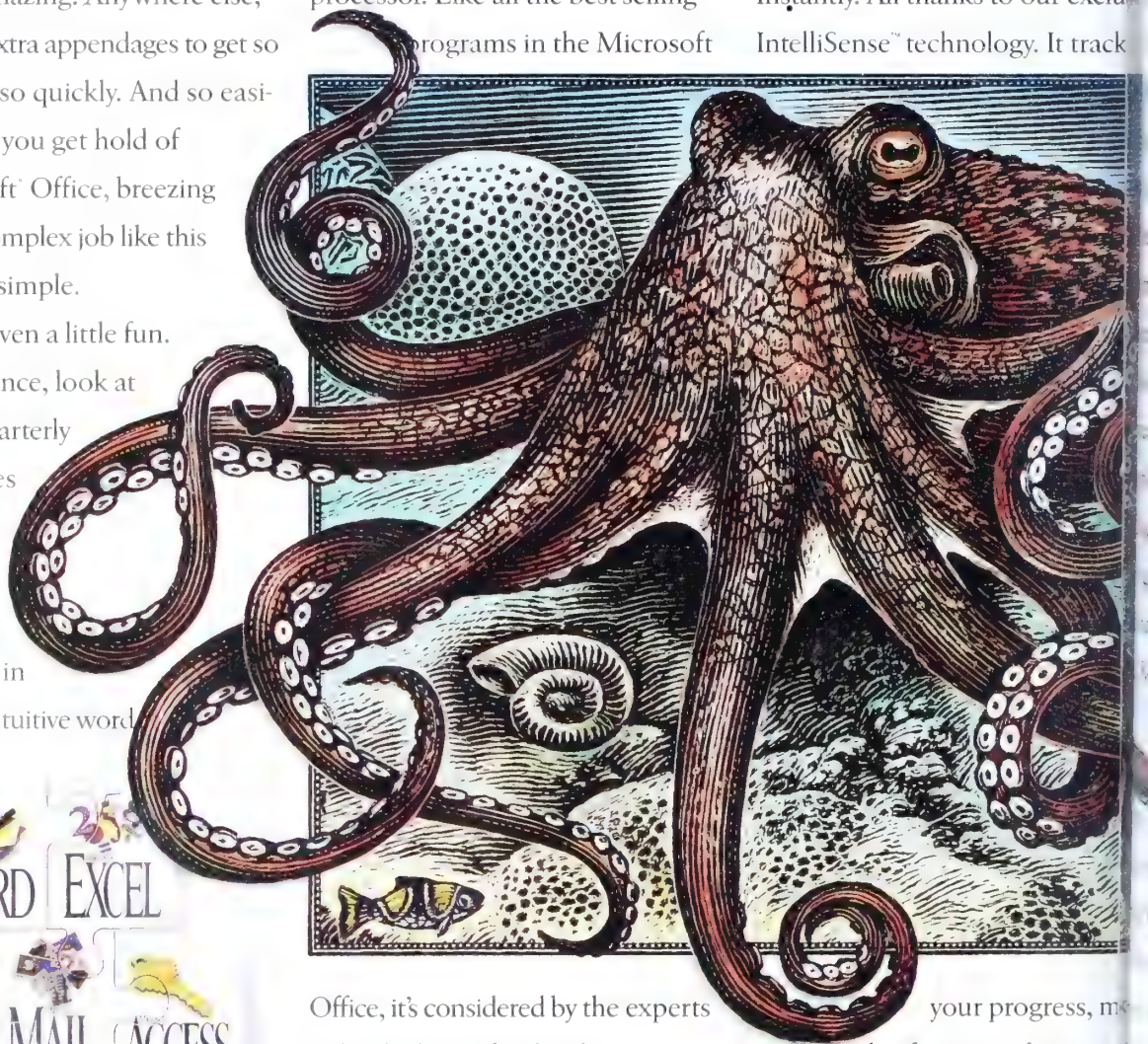
You want that report of your



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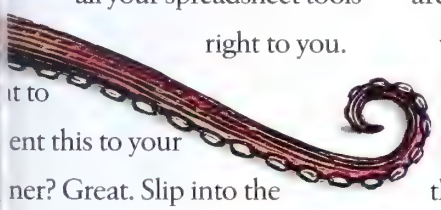

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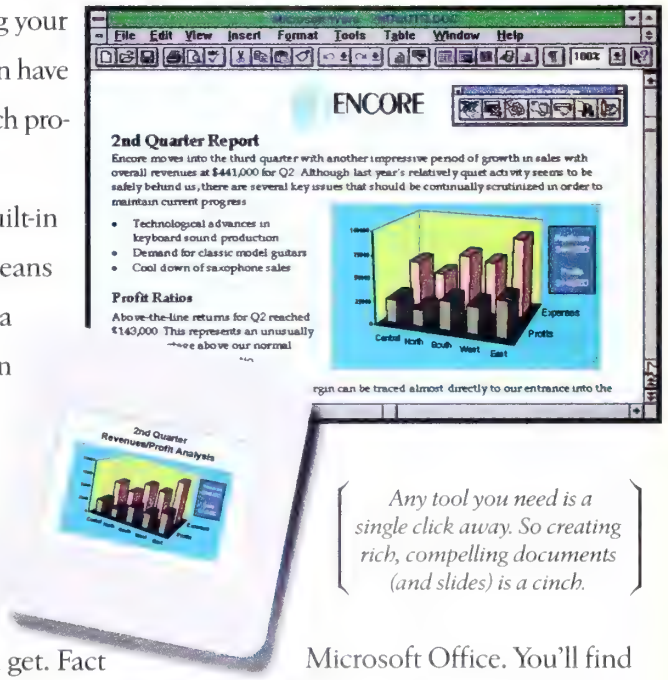

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INDUSTRIAL STRENGTH —AND LOOKS LIKE IT

Black & Decker PowerShot Heavy Duty Staple Gun

Designer: Gary Grossman of Innovations & Development

Sometimes, looks make all the difference. When Black & Decker Corp. marketed a novel heavy-duty staple gun in the early 1980s, it won awards for a design that reduced "kickback." But the tool flubbed in the marketplace. Its fatal flaws: The tool looked too flimsy for serious users, and it wasn't easy to see how to hold it.

Now, B&D has form and function right. Its PowerShot staple gun uses the same concept—moving the grip forward so you squeeze directly over the stapler's "hammer" instead of at the back as conventional lever-type staplers do. That eliminates kickback and makes it a breeze to squeeze. And Gary Grossman, a principal at Innovations & Development Inc. in Edgewater, N.J., made the device still more user-friendly with a soft-rubber handle and finger holes that guide the user to the correct grip. He and the B&D team also substituted zinc-aluminum alloy for plastic, making it more durable.

Such durability is crucial, since the PowerShot is aimed at professionals as well as homeowners. Its silvery look and lightweight but sturdy feel appeal as much to the full-time carpet installer as to the weekend putterer.

The stapler offers several other novel touches. A "staples remaining" window tells you when it's time to reload. And an easily accessible "staple chamber" makes it simple to clear jams and load. One small flaw: Some standard staples come in rows too long for the PowerShot, so users have to break off a quarter-inch or so. That inconvenience is a concession to compactness. But B&D offers its own brand of staples that come in the right length.

For B&D, another plus is that the device is fast and easy to manufacture. Because it is die-cast, it uses relatively few parts, a touch of simplicity that appeals to B&D's manufacturing folks.

With a retail price of $20 to $25, the PowerShot has moved fast in the $100 million-a-year market. Since its launch last August, the tool has snared more than 10% of the market, B&D Product Manager Diane DeOssie says. At some retailers, she says, the PowerShot is matching sales one-for-one with the industry's leader, the Arrow T-50. Now, that's a bottom-line impact for design.

By Joseph Weber in Philadelphia

AIN'T SO RETTY, BUT WORKS

ermaid's Small age Shed

gner: Drew Maple

ven its designer admits t's just a big plastic Rubbermaid's outdoor hardly has the obvious of a new car or a sleek o. Yet the shed's suc- shows how mastering mundane and respond- o consumer needs may ıore critical than flash glitz.

r Rubbermaid Inc., er of garbage cans, n' Savers, and scads of plastic containers, out- storage was a logical extension. What pted the company to his to its other yard ıcts was market re- h that revealed people dissatisfied with their and metal sheds. They l and rusted and had maintained. Worst of ıey could be a night- to assemble.

bbermaid found a plas- lution, as it has so many other hold problems. shed, which ıres 5 ft. by by 4 ft., can be ıbled in 20 min- y two people, says de- Drew Maple. Eight panels interlock to the structure. The as- ers have to hammer in hinge pins and screw lid support. The shed es virtually no main- e and eventually can cycled. It opens from the top or the front, with a small ramp in front and a place for a lock on top. Buyers may drill a few holes to stake the shed to the ground or fasten it to a wall.

To simplify assembly, Maple relied on a key-slot design similar to that of the company's Little Tikes playhouses and activity gyms. The panels snap together without fasteners.

One of the biggest challenges was to figure out how to manufacture the high-density polyethylene panels. While other companies have blow-molded panels with higher-priced, engineering-grade resins, few besides Rubbermaid have done it with cheaper commodity resins, says Maple. Even so, the shed required new tooling and reengineering at Rubbermaid's Winfield (Kan.) plant.

The Rubbermaid team debated several design tradeoffs along the way. For example, they argued about whether or not the shed should have a floor. Most yard sheds don't have one, and a floor, of course, would add to materials and cost. Maple and product manager Brad Cors fought for a floor—and won: A floor makes for a cleaner shed. At the same time, they decided to go without a built-in shelf, leaving a ledge and grooves for one if the owner wants to add it.

The result: a product that's truly functional—but hardly beautiful. The Industrial Design Excellence Awards jury divided sharply over whether this prosaic box rated a gold award. Lella Vignelli of Vignelli Associates Ltd., for instance, argued that, practical as the shed might be, it lacked aesthetic creativity. Some on the jury went so far as to call it "bubba design." The majority, though, agreed with Noel Zeller, president of Zelco Industries in Mt. Vernon, N.Y., who said: "Good design is not just a pretty face." Zeller thought it deserved a gold award. In the end, the shed snared a bronze.

Maple says that the nonaesthetic approach was market-driven: Given the various styles of homes the shed has to fit with, "to make a really strong statement would probably have negative impact in the marketplace."

That hasn't happened: The shed, priced at about $200, has done better than expected. One popular use: to store garbage cans. Anticipating that, Maple made sure there was enough room for two of Rubbermaid's 45-gallon ones. Still, he's surprised people would buy one container just to put another in. Yet the 31-year-old designer must be doing something right: He also won a bronze award this year for another mundane product—a tool chest.

By Zachary Schiller in Cleveland

I'm sitting at my desk.

I look down and there's

Printed on it, in big white letters, is the

I pus

In walks our head of new products to tell me everything

working on for the last three years is finished.

I push it ag

In walks the head of marketing to tell me we're going

in all our new markets five years ahead of sche

I push it agair

And again.

And again.

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EDS

A COMPLEX X-RAY SCANNER THAT'S SIMPLICITY ITSELF

Vidar VXR-12 X-Ray Film Digitizer

Designer: Paradigm:design

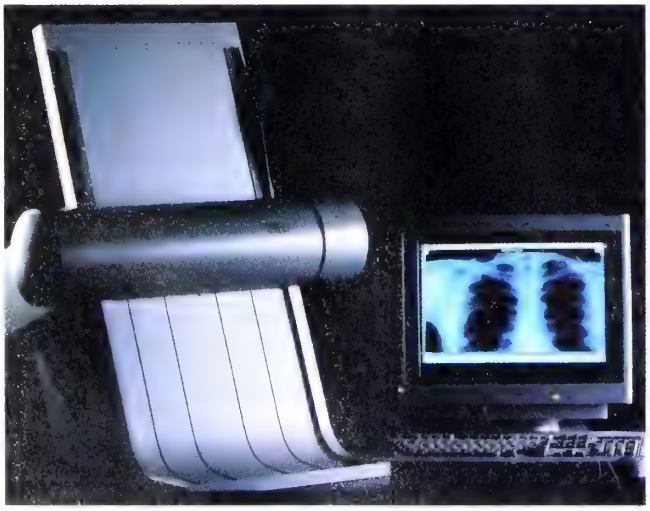
Hospitals are tough on equipment. Fast-moving gurneys can ding anything in their paths. And hard-pressed technicians have little patience for gear that isn't easy to run. As cost pressures mount, no one in a hospital can spend time reading 100-page operating manuals for complex equipment.

So the folks at Paradigm:design in Philadelphia had quite a challenge in fashioning a new X-ray digitizer, a scanner that converts X-ray pictures into computer images that can be transmitted to specialists in other cities. They wanted a product that could sit out of harm's way on a counter and be virtually self-explanatory in its use. The result: the Vidar VXR-12.

MEDICAL & SCIENTIFIC PRODUCTS GOLD

Rival products require a technician to feed the X-ray film horizontally, as with a photocopier. That makes for slow processing and machines that take up lots of space. But in the VXR-12, the film slides down vertically, reducing friction and speeding up the process. Industrial Design Excellence Awards juror Seth Banks of GE Medical Systems calls this digitizer "as intuitive to use as it is pleasing to see."

With space at such a premium in hospital radiology labs,



compactness was a major requirement for manufacturer Vidar Systems Corp. in Herndon, Va. The VXR-12 takes up about half the space of conventional units. And at 36 pounds, it can be moved easily. Vidar has packed it with electronics to link up with most host computers. What's more, the digitizer sells for about $16,000, at least $4,000 less than rival models. That makes for the kind of picture that's pretty to the eye of the toughest hospital cost-cutters.

By Joseph Weber in Philadelphia

BEHIND THE FRIENDLY GRIN

1994 Dodge Neon

Designer: Thomas C. Gale of Chrysler and team

The Neon almost didn't get its smiley-face front end. The team of Chrysler Corp. designers, engineers, and marketers that created the friendly looking subcompact initially chose a more conservative appearance with ho-hum rectangular headlamps. But in a September, 1991, meeting, former Chairman Lee A. Iacocca urged the team to make a switch to the oval lamps that had been such a hit on a Neon prototype that was shown in January of that year at Detroit's annual auto show. Iacocca got his way, which is why a white Neon now grins "Hi" from ads in magazines and newspapers.

The Neon team did not

e than that, however. It hed a three-decade De- tradition of simply scal- down large sedans when gning small ones. Led head Chrysler de- ıer Thomas C. e, they created orty shape with ude. "It is more msical and more than the Saturn, h is designed as a small- edan," says Tom Matano, azda stylist and design rd judge. "Its face, its roomier interior, its basic shape all make it a fun little car."

During the car's 42-month gestation period, members of the Neon team sought a precarious balance between keeping costs in line and building a car with the looks and features buyers want. For instance, they went all-out on safety, making dual air bags standard. But they cut corners by eschewing exterior body moldings and forming most bumpers from colored plastic rather than painting them.

The Neon took a silver IDEA award, beating out the Chevrolet Camaro, which won a bronze. Strangely, Ford didn't enter its wildly successful Mustang into the contest.

Consumers certainly seem smitten with the Neon. So far, Chrysler has 179,000 orders for the little four-door, which is priced from $8,975 to $13,000—well below most of its comparably equipped competitors. That's 30,000 cars more than the company will be able to build this year. And that's before two new versions hit the showrooms this fall: an even lower-priced coupe and a sport model with stiffer suspension and a more powerful engine. No wonder the little car is smiling.

By David Woodruff in Detroit

INSTANT PHOTOS THAT DON'T COME SPITTING OUT

Polaroid Captiva Date Plus

Designer: Henry Dreyfuss Associates

A few years back, market researchers at Polaroid Corp. secretly videotaped tourists using its instant cameras at Walt Disney World. What they discovered was both hilarious and troubling: As the cameras spit out print after print, the hapless tourists struggled to find places to put them. One man clamped several still-developing prints in his teeth. Another put them on top of his backpack, only to have the wind blow them away.

Thus was born one of the key features of Polaroid's new Captiva, the first instant camera that stores its own pictures. After the shutter clicks, the exposed print turns 180 degrees inside the Captiva and winds up in a windowed storage compartment at the back. That neat trick is one reason why Captiva has been a winner for Polaroid since it was introduced—in Europe (as the Vision) in 1992 and in the U. S. last year.

In designing the Captiva, Polaroid executives started from this assumption: Previous Polaroid models were too bulky and complex for some customers. An untapped segment of the public, they were convinced, wanted a smaller, simpler instant camera—and would accept a smaller picture size as a trade-off. A secondary aim was to make a camera that would mimic the look and features of the trim, 35mm, point-and-shoot cameras that dominate the market.

Given that mandate, designers at Polaroid set to work with Henry Dreyfuss Associates, a New York industrial-design firm. Figuring out how to include the self-storage feature without compromising reliability or adding too much to the camera's bulk was one big challenge. The prints had to do a U-turn without creasing and without breaking the pod in each print that contains the instant-developing chemicals.

To achieve the compact size and look they wanted, the designers decided to make Captiva a folding camera. But that presented a new challenge: The camera's single-lens-reflex design requires near-perfect alignment between the lens and viewfinder. So the folding mechanism needed to be foolproof enough to click into precise position every time. The designers decided that the camera's protective front cover should swing around and click into place as one leg of a triangular brace for the lens assembly. "It was this folding configuration that drove the design," says John H. Betts, who led the design team at Dreyfuss.

Captiva also sports a few other innovations for Polaroid, including a patented focusing system that uses a nearly invisible pre-flash to locate the subject, rather than the sonar system of earlier Polaroids or the infrared of most 35mm models. And the Date Plus model, which won the IDSA award, mimics popular features of 35mm cameras, such as stamping the date on photos.

The Captiva does have drawbacks. Its picture quality suffers in comparison to earlier Polaroids, and its shrunken picture size, which measures 6 in. by 2⅛ in., is 40% smaller than the Polaroid Spectra's and just a quarter the size of the prints now used by 35mm developers. But so far, the 1 million people who have bought the sleek, black camera don't seem to mind.

By Mark Maremont
Cambridge, Mass.

CONSUMER PRODUCTS GOLD

EWTON'S 'ERRARI' FFECT

vton
ssagePad 100
igner: Apple Computer
ign team

When Apple Computer Inc.'s Newton MessagePad came out last August, Garry Trudeau poked fun at it in *Doonesbury*. And the market dumped on the Newton's iffy usefulness and $600 price tag.

But even the harshest critics laid off Newton's design. It has subtly curved lines, a rich, deep color, and a tailored feel. And for that, Newton is finally getting some respect. Says IDEA judge James M. Shook: "Newton broke new ground.... It took the computer off the desk and put it into your hand." As for the criticisms, Shook pays that no mind. "When the Macintosh first came out, some people laughed," he says. "It turned out to be a blinding success."

Even if Newton, a "personal digital assistant" that is part communicator and part computer, never matches the Mac's commercial appeal, it has set a standard for how such a truly personal computer should look and feel. It has what Apple Design Director Robert Brunner calls "the Ferrari effect—sleek sculpting that says high performance.

In the fall of 1991, the six-person design team was given only eight weeks to come up with the Newton's design. They needed to create something entirely new, the company's first handheld product. They did not want it to resemble a personal computer, but a notepad—hence no keyboard and a vertical rather than horizontal design. At the same time, they needed to retain design elements that buyers associate with Apple—rounded edges, complex surfaces, and an emphasis on symmetry and icons.

John Sculley, then Apple's CEO, loved the first Newton on sight. But when he tried to slip it into his pocket, it wouldn't fit. He ordered the team back to the drawing boards. "That," Brunner says, "was panic No. 1."

They had to lose four millimeters—no problem, except the components couldn't get any smaller. So they shaved a bit from the sides and went back to Sculley. No go. "We couldn't figure it out," Brunner says. "It fit in our pockets. We were so frustrated, we considered sneaking in and snipping his pocket seams." Instead they gave up some curves and shaved a little off the stylus holder. *Voilà.* Sculley was happy.

Now all Newton needs is to make more customers happy.

By Kathy Rebello in Cupertino, Calif.

CREATING A 'DESK SCULPTURE'

Hewlett-Packard
[illegible]
Designer: Ziba Design

Next to a standard, boxy computer monitor, Hewlett-Packard Co.'s flat-panel display looks slim, sleek, and elegant. With a screen smaller than the typical display, it has far crisper resolution and emits no radiation. It's one-quarter the size and weight of a cathode-ray tube (CRT) monitor of similar resolution. The back, with rows of air-vent dots, is as attractive as the front. When it comes to aesthetics, this one takes the prize—gold.

But its simplicity is deceptive. The monitor's smooth, curved contours were devilishly difficult to design. And many tough decisions were made before the product took shape. Back in September, 1992, Hewlett-Packard's workstation group decided to emphasize its commitment to leading-edge technology by developing a stand-alone desktop monitor using the latest high-resolution flat-panel displays.

But that's all they knew. They hadn't picked a screen supplier, chosen a size, decided on a fan, or determined whether or not to offer height-adjustment, tilt, or swivel. For help, HP turned to Ziba Design Inc. in Portland, Ore.

Ziba flooded it with dozens of concept drawings, showing many options. Using the drawings as a guide, HP first made the key technical decision: to use a midsize screen from Sharp and to use cooling vents to avoid a loud, energy-gobbling fan. For simplicity, it also decided to forgo a height adjustment, aiming for a single height that would suit most users. As for the ubiquitous computer swivel, HP had another, simpler answer: just slide it around. Designing a screen so thin and light that the monitor can simply slide around to face different directions not only saved on cost but also reduced the footprint.

When the project shifted into high gear in January, 1993, Ziba moved into a fast prototyping mode, generating a continually evolving series of product iterations. First, it sent drawings to HP. HP then narrowed down the choices. Ziba made them into styrofoam models. HP then picked the two it liked best. Ziba made models of those in harder, urethane foam and incorporated more details. "This funneling approach helps the client define what it is they want," says Ziba's president, Sohrab Vossoughi.

Then, the detailed design began, using concurrent engineering: Tom Searby, an HP product-design engineer in Fort Collins, Colo., worked on the sheet metal and plastic, while Ziba's Henry Chin and Jan Hippen in Portland refined the look and feel of the product. Acting as a team, the group completed the task in three months.

Because of the high price—at more than $10,000, it is three times as expensive as top-of-the-line CRT monitors—the product needed to exude quality. HP also wanted it to take up as little desk space as possible. Its stand, which contains the electronic parts, occupies less than half a square foot.

Ziba's Vossoughi believes his goal was to create a "desk sculpture" that would look good from every angle. Judging by the awards the product has won in Germany in addition to the IDEA, that's just what the team did.

By Dori Jones Yang in Portland, Ore.

HIS MINI NEEDS NO ORDS, CABLES, OR CLOSET

torola Series 900

signer: Palo Alto Design Group

icture the typical minicomputer, the one that runs a network of dozens of terminals or desktop computers. It's erally a big metal box with racks of printed circuit cards l disk drives and a rat's nest of cords and cables. If you 't visualize one, it's because more often than not, minicomputer is stashed away in a closet somewhere.

No reason to hide this one. For its new Series 900 nputer systems, Motorola Inc. has come up with a ndsome stack of plastic modules whose gently nded fronts and wide, flat base offer a solid, durable k. The International Designers Society of America Award y calls it architectural: It looks more like a building than omputer.

But this silver medalist is one entry that didn't win for its od looks. "Think of it as the ultimate Lego set," says nes M. Shook, ustrial design nager at Tan- n Computers ., who judged business and in- strial products egory. "This oduct is leading way toward the dularization of nputers."

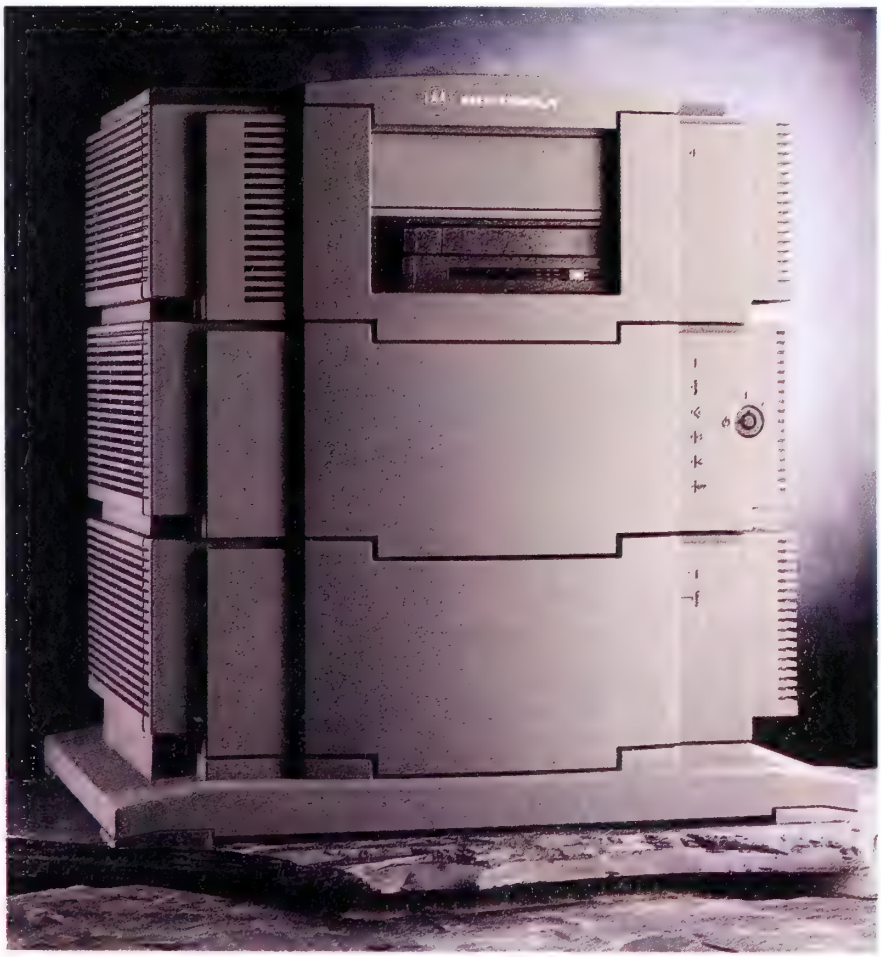
Motorola's Tempe iz.) computer up isn't the first nufacturer to fig- out that customers would prefer a modular computer that can be expanded as their businesses grow or that a series of standardized modules can reduce manufacturing and inventory costs. Few companies, however, have come up with such a simple and elegant way of putting all the various pieces together. Everything in the Series 900 snaps easily into place, and up to five modules can be stacked to construct a single, integrated computer.

Buyers can build a simple computer, and, if they need more power or more memory, new modules can be added to put together a fully loaded system that is capable of supporting a network of hundreds of desktops.

Motorola turned to Palo Alto Design Group Inc. for help. That consultancy, which has devised personal-computer enclosures for Dell and CompUSA, came up with a scheme that gets rid of all of the cables that usually clutter a computer. Disk and tape drives, for example, come in plastic trays that slide into the chassis and click into place. And each module has a connector across the top and bottom so that, when they are stacked, all of the electrical connections are completed automatically.

The new design solves other problems, too. Nearly 90% of the failures in Motorola's computers were due to loose cables and screws and missing or incorrectly installed small parts. With the new modular design, the company is confident enough to offer a five-year warranty, the longest in the business.

By Larry Armstrong in Los Angeles



1994 IDEA WINNERS

BUSINESS & INDUSTRIAL PRODUCTS

GOLD

Automatch(g)ic Group Four Design, Avon, Conn., for Macbeth, Newburgh, N.Y.

Flat Panel Display ZIBA Design, Portland, Ore., and Hewlett-Packard, Fort Collins, Colo., for Hewlett-Packard

Newton Message Pad 100 Apple Computer, Cupertino, Calif., for Apple Computer

PE 3000 Series Pallet Truck Crown Design & Engineering, New Bremen, Ohio, Fitch, Columbus, Ohio, and Design Central, Columbus, Ohio, for Crown Equipment, New Bremen, Ohio

SILVER

Joule Drive ZIBA Design, Portland, Ore., and LaCie, Beaverton, Ore., for LaCie

Modular Enclosure for VHF/HDTV Transmitter Gad Shaanan Design, Montreal, Quebec, for Larcan Communications Equipment, Mississauga, Ont.

Series 900 Palo Alto Design Group, Palo Alto, Calif., and Motorola Computer Group, Tempe, Ariz., for Motorola

Summa Chrome Imaging System Design Edge, Austin, and Summagraphics, Austin for Summagraphics

BRONZE

ATM Surround IDEO Product Development, Palo Alto, Calif., and Gensler & Associates, San Francisco, for Wells Fargo Bank, San Francisco

BallPoint™ Mouse 2.0 Microsoft, Redmond, Wash.; Stratos Product Development, Seattle, Wash.; Metaphase Design Group, St. Louis; and Joyce Institute, Seattle, Wash., for Microsoft

BlackCurrant Computer Peripherals SG Hauser Associates, Calabasas, Calif., for BlackCurrant Technologies, Costa Mesa, Calif.

Pyramid MESHine Palo Alto Design Group, Palo Alto, Calif., and Pyramid Technology, San Jose, Calif., for Pyramid Technology

Sealed Lever Latch Southco, Concordville, Pa., and Paradigm:design, Philadelphia, for Southco

Sound System Microphone Microsoft, Redmond, Wash., and Stratos Product Development, Seattle, Wash., for Microsoft

CONSUMER PRODUCTS

GOLD

Kin-der-Link™ Skools, New York, N.Y., Autumn House, Granite Falls, N.C., and Marshall Group, New Bern, N.C., for Skools

PowerShot™ Staple Gun Innovations & Development, Edgewater, N.J.; WorkTools, Chatsworth, Calif.; and Black & Decker, Towson, Md. for Black & Decker

Rotary Cutter Fiskars, Madison, Wis.

The Raynes Rail Coco Raynes Associates, Boston; New England Plastics, Woburn, Mass.; and Milgo Bufkin, Brooklyn, N.Y., for Massachusetts Eye & Ear Infirmary, Boston

Vision Date Plus Henry Dreyfuss Associates, New York, N.Y., and Polaroid, Cambridge, Mass. for Polaroid

SILVER

Excel-Revere Cookware ECCO Design, New York, N.Y., and Corning, Corning, N.Y., for Corning

M6100 Digital Cellular Phone Mayercheck Design, Irvine, Calif.; Coast Product Development, Brea, Calif.; and Hughes Network Systems, San Diego, for Hughes Network Systems

Rabbet Cutter KMH Design, Ceresco, Mich., for Beowulf, Ceresco, Mich.

rev-X Spinergy, Wilton, Conn., and Clifford Selbert Design, Cambridge, Mass. for Spinergy

Slim Design Projection Television Receiver Thomson Consumer Electronics, Indianapolis

Sport 200 Virtual Vision, Redmond, Wash.

Zoom-Off® Quick-Release Gloves Sports-Mitt International, Berkeley, Calif., for Bollinger Industries, Irving, Tex., and Expressline, Dexter, Mich.

BRONZE

Action Packer®Work Centers Rubbermaid Specialty Products, Wooster, Ohio; KMH Design, Battle Creek, Mich.; and Waterloo Industries, Waterloo, Iowa, for Rubbermaid, Wooster, Ohio

Alnamar Pill Dispenser ZIBA Design, Portland, Ore., for Alnamar, Beaverton, Ore.

CD12 Compact Disc Carrycase Booty Design Associates, Chicago, for Outer Circle Products, Chicago

Exersaucer™ Exercise and Entertainment Center Meeker R&D, Hiram, Ohio, for Evenflo Juvenile Furniture, Piqua, Ohio

Fishing Tackle Boxes Design Central, Columbus, Ohio, and Rubbermaid, Wooster, Ohio, for Rubbermaid Specialty Products, Wooster, Ohio

Liquid Paper Dryline Dispenser Herbst LaZar Bell, Chicago, for Gillette/Papermate, Boston

Play 'N Fold™ Soccer and Hockey Today's Kids®, Dallas

Pocketshop Design Axis, Columbus, Ohio, GARE Engineering Enterprises, Roebuck, S.C. and Giro Sport Design, Soquel, Calif., for Giro Sport Design

Reno frogdesign, Menlo Park, Calif., for Media Vision, Fremont, Calif.

Rotary Paper Trimmer Fiskars, Madison, Wis.

SoundEffects Home Theater Audio System Fitch, Boston, for JBL Consumer Products, Woodbury, N.Y.

Step Lock Gate Fisher-Price, East Aurora, N.Y.

Storage Shed Rubbermaid Specialty Products, Wooster, Ohio, for Rubbermaid, Wooster, Ohio

Super Crown Cymbal Holder SG Hauser Associates, Calabasas, Calif., and Cymbal Crown, San Antonio, for Cymbal Crown

Tape Mate River Studio, Aspen, Colo., for Digitool, Aspen, Colo.

Wevox Stationary Products frogdesign, Menlo Park, Calif. for Shachihata Industrial, Nagoya, Japan

DESIGN EXPLORATIONS

GOLD

Backpack Personal Cooling System Carlson Technology, Livonia, Mich., for U.S. Army Natick Research, Development & Engineering Center, Natick, Mass.

The Measure of Man and Woman Henry Dreyfuss Associates, New York, N.Y.

Transgenerational Design: Products for an Aging Population James J. Pirkl Design, Placitas, N.M., and Van Nostrand Reinhold, New York, N.Y., for Van Nostrand Reinhold

SILVER

BallPoint Mouse 2.0 Research Metaphase Design Group, St. Louis, and Penn State University, State College, Pa., for Microsoft, Redmond, Wash.

CHOICES Ergonomic Task Chair Research Metaphase Design Group, St. Louis, for Steelcase Seating Business Unit, Caledonia, Mich.

Walkabout Anderson Design Associates, Plainville, Conn.

ENVIRONMENTAL DESIGN

GOLD

United States Holocaust Memorial Museum Ralph Appelbaum Associates, New York, N.Y., and Time Warner, New York, N.Y., for U.S. Holocaust Memorial Museum, Washington, D.C.

Wieland Furniture Exhibit Kane Design, San Francisco, for Wieland Furniture, Grabill, Ind.

SILVER

House in Maine Peter Forbes & Associates, Boston, for Natalie O. Miller

BRONZE

The Philips Competence Centre Burdick Group, San Francisco, for Philips Corporate Design, Aspen, Colo.

FURNITURE

GOLD

Zephyr™ Hammock Gary Wolf Architects, Boston, and Heliotrope, Providence, for Heliotrope

BRONZE

Aero Table The Burdick Group, San Francisco, for CASAS, Barcelona, Spain

Home Office Furniture Collection Thomas J. Newhouse Design, Grand Rapids, Mich., and DAS Designs, Holland, Mich., for Herman Miller, Zeeland, Mich.

In-Touch II Product Line SG Hauser Associates, Calabasas, Calif., for Interbath, City of Industry, Calif.

MEDICAL & SCIENTIFIC PRODUCTS

GOLD

Tranquility MP-r Machen Montague/BOLT, Charlotte, N.C., and Healthdyne Technologies, Marietta, Ga., for Healthdyne Technologies

VXR-12 Film Digitizer Paradigm:design, Philadelphia, and Vidar Systems, Herndon, Va., for Vidar Systems

SILVER

Integral Workstation Product Gene… Cambridge, Mass., and PerSeptive … Biosystems, Cambridge, Mass., for … PerSeptive Biosystems

QUAD-PLUS Knee Board Designfo… Scottsdale, Ariz., for Advance The… Systems, Peoria, Ariz.

Series 20,000 Legacy Patton Design… Irvine, Calif., for Alcon Surgical, In… Calif.

VersaPulse Select Surgical Laser L… Design, Palo Alto, Calif., and Cohe… Santa Clara, Calif., for Coherent

BRONZE

CheckMate Plus® Blood Glucose Mo… ing System Worrell Design, Minnea… for Cascade Medical, Minneapolis

FluorImager 575 Lunar Design, Pal… Alto, Calif., and Molecular Dynamic… Sunnyvale, Calif., for Molecular Dynamics

PACKAGING & GRAPHICS

BRONZE

Medical Fluid Tray Conceptual Des… Industries, Irvine, Calif.; Baxter He… care, Glendale, Calif.; and Creative … Forming, Ripon, Wis., for Baxter Healthcare-Hyland Div., Glendale, … **Q-Pack™** Queens Group, Long Islan… City, N.Y., and Paul D. Miller Desi… New York, N.Y., for Queens Group … **The Marsbook** Human Code, Austin… and Design Edge, Austin, for NASA … Flight Crew Support Div., Houston … **Virtual Conference Engine** Human … Austin, for Apple Computer, Cuper… Calif.

STUDENT DESIGNS

GOLD

U-Prog Mobile Workstation Mark A… Nichols of Cleveland Institute of Ar… Cleveland

SILVER

Centaur Angelika Schubert and Ma… Todd Belle of Art Center College of … sign, Pasadena, Calif., for NACCO Ma… als Handling Group

Portable Hand Control LC-1 Bryan … ters of Auburn University, Auburn, … **Universal Drinking Fountain** Jason … and William Cheung of SUNY at Buf… Buffalo, N.Y.

BRONZE

Re'nop Jar Opener Bryan Lump of … waukee Institute of Art and Design … Milwaukee, Wis.

TRANSPORTATION

SILVER

Neon Chrysler, Highland Park, Mich…

Oshkosh "A" Series Side Loading Refuse/Recycling Vehicle Renquist Associates/Layton School of the Art… Racine, Wis., for Oshkosh Truck, Oshkosh, Wis.

BRONZE

1993 Chevrolet Camaro GM Design C… ter, Warren, Mich., for Chevrolet M… Div., Warren, Mich.

FORD TAURUS
AMERICA'S BEST-SELLING CAR. AGAIN.*

Skip the coffee. There's no better way to begin the day than with a serious dose of Taurus SHO. Right there in your garage is a 24-valve caffeine-free wake-up call. But the SHO's stimulating qualities are not limited to its performance alone.

SHO's sleek good looks are a subtle hint at the power that lies within. Then, behind the wheel you'll notice that the driver-oriented instrumentation and articulated bucket seats are designed so your attention stays on the road.

EYE-OPENING PERFORMANCE.

This 220-horsepower eye-opener will turn your commute into the ideal way to enjoy speed-sensitive variable-assist steering and the newly refined four-wheel sport-tuned suspension. And since the power of SHO's 24-valve DOHC engine is balanced by a standard anti-lock braking system and dual air bags,** you'll be able to concentrate on a world-class driving experience.

Isn't it time to awaken the performance driver within? Ford Taurus SHO. Your commute will never be the same.

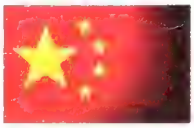
*Based on 1993 CY manufacturer's reported retail deliveries
**Always wear your safety belt

HAVE YOU DRIVEN A FORD LATELY?

Ford

CHINA

Is prosperity creating a freer society?



The contrast is stark. Chinese authorities continue their crackdow on dissenting voices and put security forces on alert in Tiananm Square. At the same time, in the grimy central city of Wuhan, professor is bringing a new concept to China's heartland: the rule of la Armed with a Yale Law School degree and a team of young associates, W Exiang runs China's first public-interest legal center. From his bustling off es, Wan takes on government officials—including members of the muc feared national police, the Public Security Bureau (PSB)—who have long ridd roughshod over individual rights.

Increasingly, Wan is winning. In one recent case, his Center for the Protection of the Rights of Disadvantaged Citizens came to the defense of an entrepreneur from Hangzhou who left his job as a technician at a state-backed company to start his own business. Accusing the man of taking company patents, police put him in detention, ransacked his home, and confiscated all his belongings. After a plea from the man's wife, Wan dispatched two lawyers to represent him. They won—and got the PSB to pay damages of 500 yuan—the equivalent of six weeks' salary. Altogether, the center, which is funded in part by the Ford Foundation, has received 1,600 requests for help.

As the June 4 anniversary of the 1989 Tiananmen massacre approaches, President Clinton is poised to make the politically costly decision to renew China's most-favored-nation trading status (page 102). He is doing so even though China has been cracking down hard on its most vocal dissidents. It has re-arrested Wei Jingsheng, a leader of the "Democracy Wall" movement of the late 1970s. Beijing has imprisoned many other political activists and has rounded up religious and labor leaders.

But no matter what an increasingly jittery leaders does to repress and control, a quiet revolution is tak place. Across the Middle Kingdom, the glimmerings o freer society can be seen in the actions of Chinese such Professor Wan. China's contact with the U. S. and the res the world is helping make that happen. Although Clinton's cision was in part based on pure commercial reasons, it d reflect a growing view among expe that the annual debate about hum rights in China has been overtaken deeper, grassroots change in the wor most populous nation.

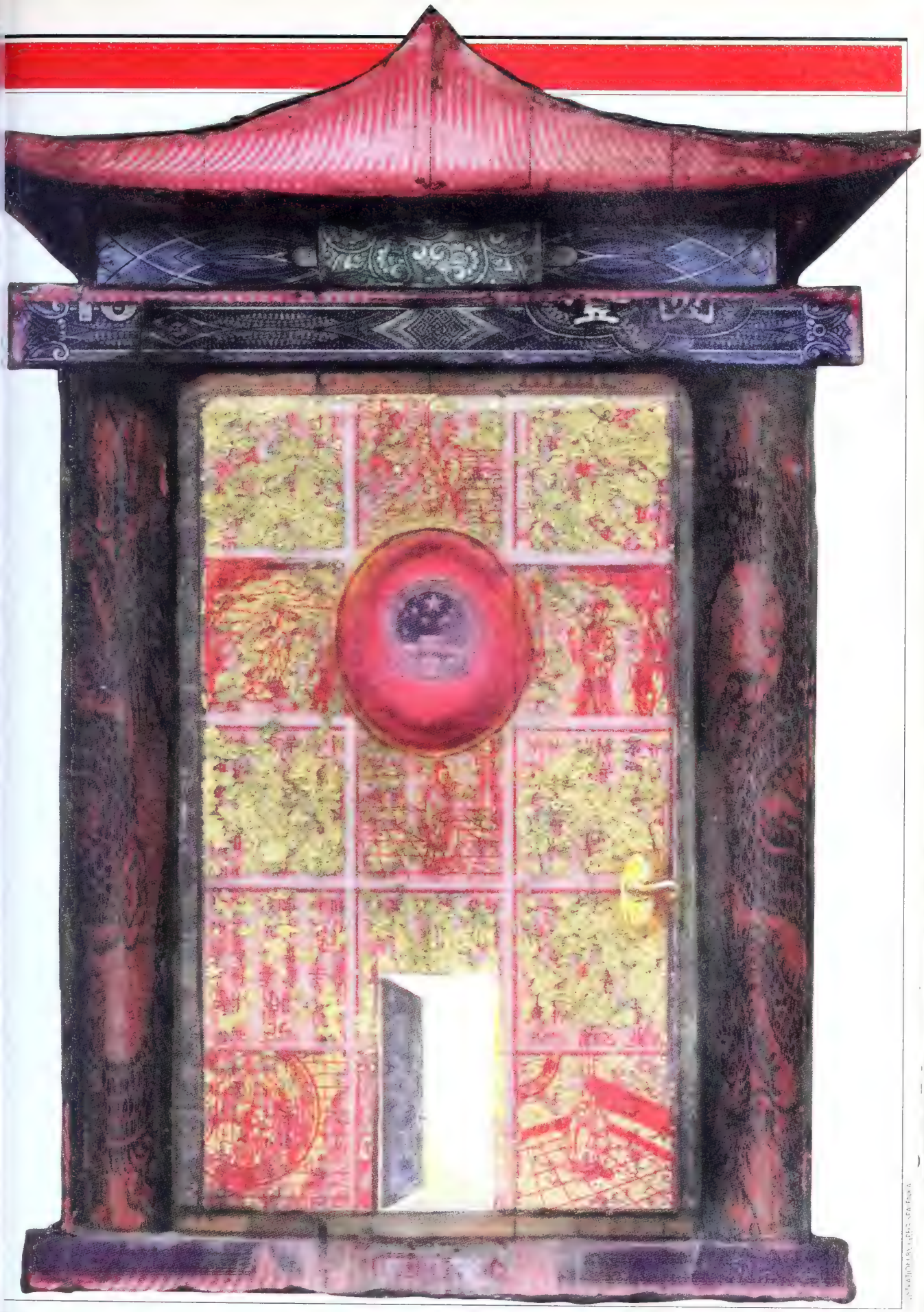
An explosion of information techno gy, for example, has allowed the C nese to link up to the world with machines, telephone lines, satellite di es, and personal computers. Thanks market-oriented reforms, millions of C nese can now decide where to work a live instead of being told. A growing cal media, aligning with regional pow brokers, is spotlighting tension betwe provincial authorities and Beijing. A workers and peasants are becoming m vocal about protesting corruption, l offs, and taxes.

Two or three years ago, signs of p

THE OPEN DOOR

★

Economic reform and years of double-digit growth have begun to transform China's political and social life, loosening Beijing's iron grip on the country's 1.2 billion citizens. As a result, the glimmerings of a freer society have become visible, despite attempts by the Communist Party leadership to repress political dissent.



ple circumventing or undermining totalitarian rule could be dismissed as anomalies. But no longer. Just as China's economic boom has brought increased prosperity to millions, so too is life for ordinary Chinese becoming easier and freer. "There has been a substantial evolution—economic, social, and political—that makes the state less intrusive in people's lives," says Kenneth G. Lieberthal, a China expert at the University of Michigan.

Indeed, the central judgment that Deng Xiaoping made 15 years ago now appears to be proving faulty. Deng reckoned that by opening the door to the outside world, China could absorb foreign investment, trade, and technology while spurning the cultural and political influences, or "bourgeois liberalization," that would challenge Communist Party rule.

But years of double-digit economic growth are transforming Chinese society itself, loosening Beijing's control over 1.2 billion people. In Guangdong, workers angered by dangerous factory conditions have formed more than 800 illegal trade unions. In Beijing, live talk shows allow radio listeners to discuss once-taboo subjects, from urban pollution to extramarital affairs. In a Shanghai factory, the subject at mandatory Communist Party meetings is bonuses, not politics. And in coastal cities and interior villages, attendance at underground churches is soaring. Virtually no one accepts the ideology called communism anymore.

SHIFTING SANDS. Many of these grassroots changes have frightened the Communist Party leadership, which is already rattled by Deng's deteriorating health and an inevitable power struggle. Yet the earth continues to shift under the leadership's feet. Beijing must encourage growth to stay in power, but that only increases the potential for greater individual freedom. Only a few years ago, the government could dictate where citizens lived and worked, when they married, and when they could have a child. But today, a rising middle class is quietly challenging centralized control. "Change is happening from the bottom up, regardless of what happens with the Communist Party," says David S. Goodman, a fellow at Murdoch University's Asia Research Center in Perth, Australia.

That doesn't mean China's transition to the post-Deng era will be smooth. The party still maintains its monopoly on power. Moreover, the state controls the media and arrests whomever it wants. In Tibet and Xinjiang, ethnic minorities face severe repression. Meanwhile, the tumultuous move to a market economy has created a political and social powder keg. The economy grew 12.7% in the first quarter, barely cooling off from its 13% pace in each of the past two years. Inflation is 24.6% in big cities, and corruption among officials is widespread. In 1989, that combination led to large antigovernment demonstrations. If similar unrest breaks out after the death of 89-year-old Deng, the leadership may once again call in the troops.

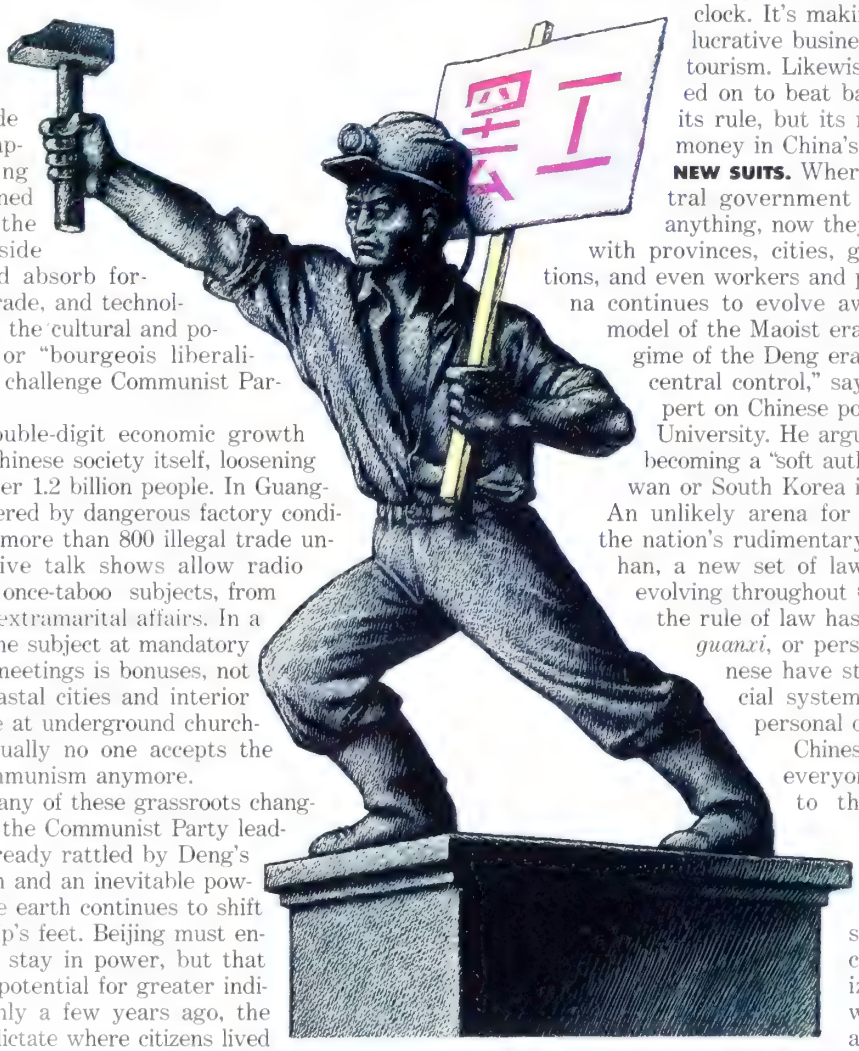
As the years after Tiananmen have shown, however, the People's Liberation Army isn't interested in turning back the clock. It's making too much money in lucrative businesses, ranging from toys to tourism. Likewise, the party can be counted on to beat back outright challenges to its rule, but its members are also making money in China's rush to get rich.

NEW SUITS. Where once the party and central government could dictate just about anything, now they must compete for power with provinces, cities, giant quasipublic corporations, and even workers and peasants. As a result, China continues to evolve away from the totalitarian model of the Maoist era and the authoritarian regime of the Deng era. "The system is losing its central control," says M. Scot Tanner, an expert on Chinese politics at Western Michigan University. He argues that China is gradually becoming a "soft authoritarian" regime like Taiwan or South Korea in the early 1980s.

An unlikely arena for this clash of interests is the nation's rudimentary legal system. As in Wuhan, a new set of laws and property rights is evolving throughout China. In a country where the rule of law has long been subordinated to *guanxi*, or personal connections, the Chinese have started to turn to the judicial system to resolve business and personal disputes.

Chinese citizens are suing almost everyone—from local enterprises to the police. For instance, Zheng Chengsi, a slender, bespectacled professor in Beijing, brought suit against two of his former students last year after discovering they had plagiarized more than 60,000 words from his work on—all things—intellectual-property rights. Zheng's lawyers filed the case in Beijing's East District court last year. The defendants tried, in vain, to persuade Zheng to settle. But he insisted he didn't want damages. "My rights were violated," he said. "I wanted these things to be published." In August, Zheng got his wish: The judge ordered the defendants to publish details of the case in nationally circulated newspapers.

Like Zheng, most Chinese plaintiffs are involved in disputes with other citizens. But some citizens are challenging government officials in court. In 1992, Liu Benyuan, an entrepreneur in Sichuan province, sued local cadres who tried to take away his mineral-water bottling plant. They were upset because Liu refused to pay them off. Besides his bot-



LABOR UNIONS

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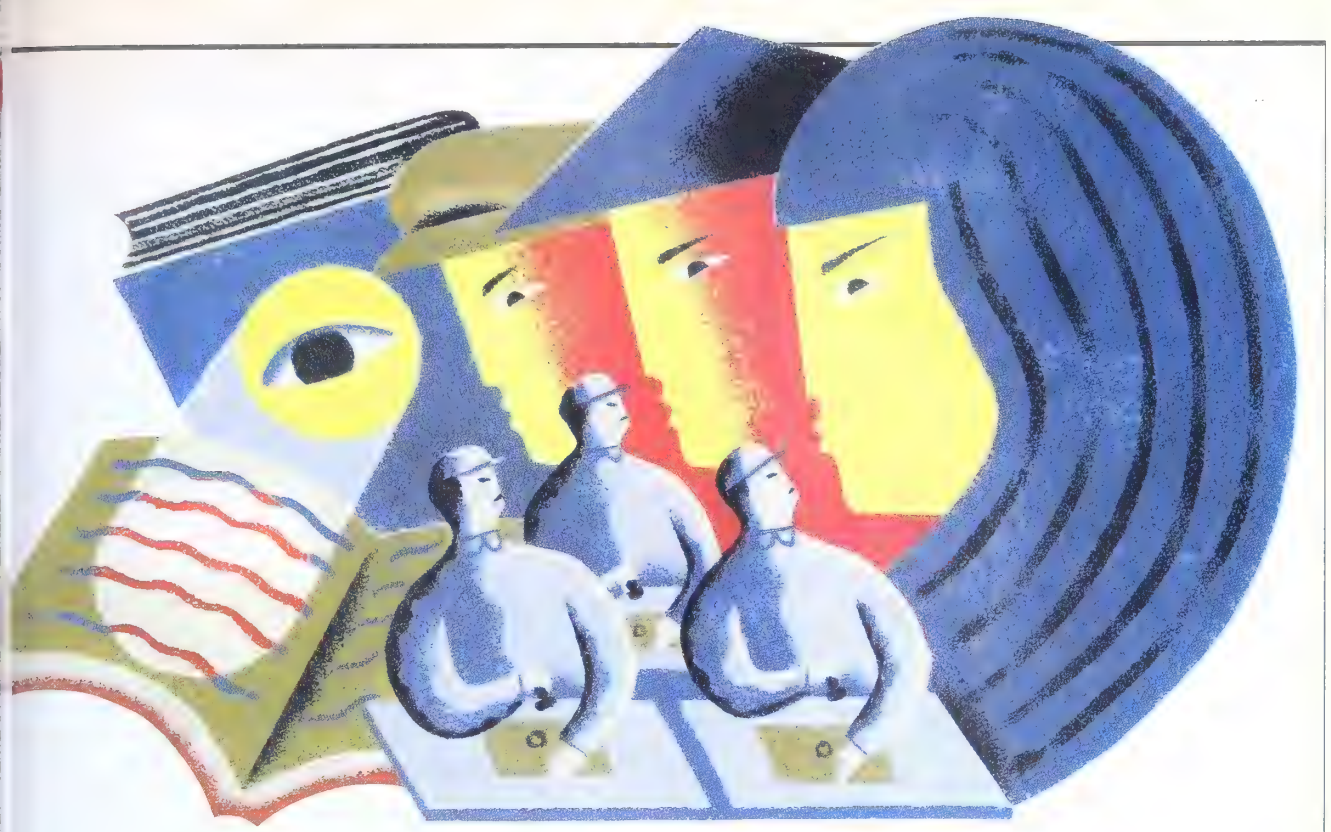
BEIJING'S STANCE: Worried about worker unrest, the government has arrested or deported prominent labor leaders. Products from prison factories continue to make their way to the U.S.

UNDERLYING CHANGE: As illegal unions grow, strikes are spreading in state factories. Angered by corruption, city dwellers and peasants are staging demonstrations.



plant, they also closed his chemical printing factories. Liu fought back. February, a court ruled in his favor, g him back his businesses.

ina's legal system is ill prepared to le the growing clamor for justice. laims multiply, the number of law- is expected to quadruple, to about 00, by the year 2000. Many citizens nue to distrust the system's impar- y, since local officials often treat ts as arms of their governments. when the courts do act indepen- ly, they often have great difficulty cing their judgments. That led edi- of the official *Legal Daily* newspaper fay 23 to issue a daring call for an pendent judiciary. "The idea of eco- c rights is spilling over into other s such as individual rights," says na Kolenda, a Beijing-based lawyer the New York law firm Paul, Weiss, nd, Wharton & Garrison. "It has ked a consciousness."

THE LEGAL SYSTEM

★

BEIJING'S STANCE: The government continues to arrest whomever it wants. Party officials influence court proceedings, and judges often have difficulties enforcing their rulings.

UNDERLYING CHANGE: The Chinese are increasingly turning to the judicial system to resolve business and personal disputes. Individuals are suing government officials. Critics have begun openly calling for a judiciary that is free of government influence.

ILING CAULDRON. The demand for more rights is moving nd individual lawsuits and sparking organized, large- protests. Two groups recently staged sit-down strikes in of the Shanghai municipal building, protesting govern- secrecy and consumer ripoffs. The unrest has also ad to the countryside, where 75% of China's population . Last year, about 4,000 Guangdong villagers conducted a nstration on a main thoroughfare. They were upset that cadres had sold off prime farmland to Hong Kong real es- developers.

ore worrisome to Beijing, unrest is spreading in factories, e workers increasingly are organizing. That has spooked government, adding to worries that dissidents and intel- ials are reaching out to disgruntled workers. But as -owned enterprises lay off employees, workers throughout China are going on strike. In March, there were 270 strikes in Liaoning, Shaanxi, and Sichuan provinces, several lasting as long as 40 days and involving 10,000 workers. In Tianjin last fall, laid-off workers marched on a state-run factory, carrying signs asking: "How can we feed our children?" Says Trini Leung, Chinese labor expert at the University of Hong Kong: "Labor unrest is bubbling very hot, and the authorities are worried."

Like peasants in the countryside, urban Chinese workers are furious about the rampant corruption and lawlessness among some well placed officials. One day last fall, a Shanghai bus driver found his way blocked by parked limousines in front of a karaoke bar frequented by government and Communist Party officials. When the bus driver told the chauffeurs to move, a group of men fatally beat him. Shanghai's bus drivers responded with a wildcat strike, refusing for several days to drive on the busy route.

The state hopes to prevent an explosion of labor unrest by encouraging laid-off workers to find jobs in the growing private and quasipublic sectors. But the unrest is not limited to the public sector. Workers at foreign joint ventures run by Taiwanese, Hong Kong, and other foreign investors have struck to protest abysmal working conditions. In Fujian province, where Taiwanese companies employ more than 400,000 people, workers often spend 16 hours a day on the job without overtime pay. Migrant workers in Guangdong joint ventures typically make $35 a month, less than half of what local residents make for the same work. Last fall, 149 workers died in fires at two factories run by investors from Hong Kong and Taiwan.

Even with its many problems, the private sector's growth has made it much harder for Big Brother to keep tabs on each

citizen. Economic reform has vastly increased mobility for ordinary Chinese. That has undercut the *dang an*, or personal dossier, system. The *dang an*, which includes an employee's family background, political leanings, and class status, once was used by officials to retain workers, limit promotions, and even ruin careers. But now, Chinese are going into business for themselves, while foreign corporations don't care about such dossiers.

With the declining importance of the dossier, the party's stifling presence in the workplace has been drastically reduced. Party bosses are no longer the decision-makers. And the political meetings that were once mandatory are no longer held at wholly owned foreign ventures or at many joint ventures. Even at state enterprises, less time is spent mouthing Marxist mantras. At China Textile Machine Co. in Shanghai, political meetings have been pared from an hour a week to 20 minutes. "The empty talk is gone," says Zheng Bohua, the company's deputy general manager. "Now we discuss production."

U. S. companies, although anxious to defend their commercial interests in China, argue that they, too, are changing the thought processes of Chinese workers. Learning how to make individual decisions does leave a deep imprint. And working for a Western company almost automatically means a higher standard of living, with better pay and benefits. "If I were asked to go back to a state enterprise, that would be hard to deal with," says Ren Shouqin, 54, vice-president at China Hewlett-Packard Co. in Beijing. HP sent him to the Monterey Institute of International Studies for an MBA.

SOAPS AND CNN. At HP's headquarters in Beijing, well-heeled young women and men work at computer terminals, watch educational videos, send electronic mail, and read foreign magazines. In the Beijing area, 100,000 to 200,000 Chinese citizens work for foreign companies in offices that increasingly resemble the home office. Cai Ping, a 23-year-old manager in HP's personnel department, regularly communicates with HP staffers in Hong Kong and Palo Alto, Calif. "It's as if we're in the same building," she says. "Right now, I'm in touch with the trends of the world."

It's not just elite workers at foreign multinational corporations who are in touch with the rest of the world. In Guangdong, millions of people get their news from two Hong Kong television stations. With a satellite dish, moreover, they can get up to 18 other stations. Despite a ban on such dishes, they are common fixtures in the Guangdong urban landscape. Millions of Chinese who understand English will soon be able to watch Cable News Netw

Of course, the state-controlled media remain on a t leash, and authorities still strike out at individual journa who hit too-sensitive nerves. In April, Xi Yang, a reporter a Hong Kong newspaper who had written about plans fo interest-rate increase, was sentenced to 12 years in prison allegedly "stealing state financial secrets."

But commercial imperatives are creating the potentia more reliable news. TV stations in wealthy coastal cities h stepped up coverage of social and economic news. A re protest in Shanghai was covered by one government tion, despite efforts by city officials to black it out. Mos the time, stations stick to more popular fare to lure a br er audience—and advertisers. Taiwanese soap operas now common, as are news stories about prostitu and corruption.

TALK RADIO. At the same time that l governments are opening commercial stations and newspapers, p organs are on the decline. circulation of *People's D* dropped from 2.3 millio 1992 to 1.65 million last y With the government cut back on press subsidies, fight is on for advertising lars and for circulation ga Some papers have respon by printing fewer polit screeds and more allur tales of sex and violence.

Economic change has boldened the business pr As millions of Chinese h become stockholders for first time, the business p has become more aggress in shaking up China's co rations and shining a light corruption. An increasingly fluential business paper is *Shanghai Securities News.* paper warns of stock market shen gans and covers civil lawsuits involv companies. A few weeks ago, the pa ran the first word of a lawsuit b widow who sued a securities firm a her husband committed suicide. S claims the firm forced him to engag illegal insider trading. "This paper re tells us the truth," says one investor

Radio is also slowly moving aw from the party line. Talk radio abou in the large cities, where people's fr trations and desires anonymously s out over the airwaves. On Guangd radio, callers regularly criticize the g ernment, sounding off on everyth from police brutality to trade policy. one recent evening, crime is the big c cern, as listeners complain about r beries on buses, highways, and c streets.

American talk radio it's not. But t profusion of media outlets has create forum for the country's various pov groups to fight their battles. In the p

FOREIGN INFLUENCE

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BEIJING'S STANCE: Deng reckoned the Chinese could absorb foreign investment and technology while spurning the cultural and political influences that would challenge Communist rule.

UNDERLYING CHANGE: As Beijing encourages more economic growth and more contact with the outside world, its citizens are demanding more rights.

owerful Propaganda Ministry could genize the country's newspapers. as the decentralized economy has more power to regional chieftains, us factions are vying for control. conservatives and reformers wield- ontrol of media outlets, China has ne official press but several. *Peo- Daily*, controlled by the conserva- , therefore reports on strikes and unrest to demonstrate the dangers licies advocated by reformers such Vice-Premier Zhu Rongji, while ghai papers report on successful ms.

en though China's media can hardly lled free, the emergence of diver- voices means the center's ability to ol people's minds has vanished. The values upon which communism was led are shifting. Since so few Chi- believe in its ideology, the Commu- Party's leaders have no option but to ahead with economic modernization—even as it unleash- cial changes. To justify its existence, the party has to de- prosperity, not class struggle. These pressures can only it as more Chinese accumulate wealth.

DOOR IS OPEN." To contain the damage, Beijing's leaders adopted a strategy of strategic retreats. By pulling back tain areas, the leaders hope they can limit popular unrest riumph in the end. But it's unlikely that 1.2 billion Chi- will be content with just the beginnings of a legal sys- a freer press, and a trade-union movement. Having won gains in the past few years, they are pressing for more. ced with these demands, the Communist Party will be onted with tough choices. It can lash out, as it did in Or it can begin to transform itself, as did autocratic par- n Taiwan and South Korea. A violent crackdown would be a huge step backward and would be unlikely to work in the long term. As the years after 1989 have demonstrated, hard-liners cannot repress an entire society and still preserve economic reform.

No one is arguing that China is about to blossom into a multiparty democracy. The government's strategy is to co-opt potential pressure groups before they become independent political forces. The technocratic leaders who are gradually taking over the reins of power from the old-time revolutionaries are more willing to allow interest groups to express their viewpoints—but only as long as they remain within the confines of a single party.

For now, many Chinese say they are too busy making money to think about politics. Young Chinese, in particular, are learning that wealth means the freedom to travel, to buy foreign newspapers, to win a court case against a corrupt government official. "If you have money," says a taxi driver in Fuzhou, "then you can buy human rights." By this reckoning, the best thing Washington can do to nurture greater rights in China is to make sure its doors remain as open as possible to investment and ideas. "We have confidence about the future," says Aven Yang, senior manager for materials at Northern Telecom Ltd.'s joint venture in Shekou. "There is bread, and the door is open. We don't want the door to close." The rest of the world should make sure it doesn't.

By Joyce Barnathan in Shanghai, with Pete Engardio in Guangzhou, Lynne Curry in Beijing, Dave Lindorff in Hong Kong, and Bruce Einhorn in New York

MEDIA & TECHNOLOGY

★

BEIJING'S STANCE: The leadership has launched a harsh crackdown on press freedom, jailing dozens of reporters. It has banned use of satellite dishes in an attempt to control the airwaves.

UNDERLYING CHANGE: Commercial demands are creating the potential for reliable reporting. Business papers have become more aggressive, talk radio shows allow callers to criticize officials, and the satellite ban is ignored.

Continued on page 102

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CLINTON'S U-TURN WON'T MEAN CHINA GETS A FREE RIDE

Decoupling MFN from human rights will allow him to play hardball on other issues

A controversial Washington rite of spring seems headed for extinction with President Clinton's expected decision to renew China's most-favored-nation (MFN) trade status. Ever since the 1989 Tiananmen Square massacre, human-rights advocates and their backers in Congress have tried to force the White House to use its annual review of China's access to the U. S. market as a club to make the Beijing government treat its people better. But in a political about-face, aides say Clinton will no longer link trade to human rights, a change that puts U. S.-Chinese relations on a more stable footing.

Realizing that relations with China are too valuable to jeopardize over a single issue, Clinton is removing the source of greatest friction and mistrust in relations between Washington and Beijing. But that doesn't mean tensions will fade away. Instead of converging on one major focal point such as MFN, conflicts will be played out over a host of economic, security, and political issues.

For starters, U. S. officials are bracing for dollar-for-dollar retaliation from Beijing if Clinton imposes even token sanctions on goods made by the Chinese army. Says a senior Administration official: "The Chinese don't play the game soft." That means U. S. business could lose some smaller contracts.

TRADE ABUSES. But decoupling MFN from human rights will let Clinton play hardball, too. Without having to worry that everything he says could prompt Congress to revoke China's trade status, he can be more blunt about Beijing's dismal treatment of political prisoners, says Gerrit W. Gong, director of Asian studies at the Center for Strategic & International Studies in Washington. Indeed, Clinton is expected to step up pressure on China to permit prison visits by the International Committee of the Red Cross.

At the same time, U. S. trade hawks will have more freedom to crack down on trade abuses. China's mounting trade surplus almost certainly will become a target of greater U. S. criticism. And officials already are planning to cite China as a "priority" violator of American intellectual property rights. "It's going to happen," vows a senior Administration official, who says there's no way China can make enough progress by a July 1 deadline to avoid censure. The move will immediately launch a formal investigation into Chinese piracy of software and recordings that could lead to curbs on China's exports to the U. S.

Washington also can be counted on to make it as tough as possible for China to gain entry to the General Agreement on Tariffs & Trade (GATT). U. S. trade officials insist that Beijing must first reform its banking system, liberalize its financial markets, and publish its still-murky trade regulations. "The Chinese have a long way to go" before their economy acquires enough free-market characteristics to warrant [redacted] membership, says a senior U. S. offi[redacted]

On the security front, the U. S. [redacted] China could tangle over the North[redacted] rean nuclear threat if Washington p[redacted] es for sanctions on Pyongyang. Be[redacted] opposes stiffer curbs. U. S. arms [redacted] trollers hope also to revive talks [redacted] China aimed at extracting a firm pl[redacted] not to peddle advanced missile tec[redacted] ogy. That will be tough since Ch[redacted] leaders are still sore about sanc[redacted] Clinton imposed last sum[redacted] for missile tech transfer[redacted] Pakistan.

SLOW BURN. Capitol Hill, w[redacted] has been backpedaling fur[redacted] ly to delink MFN and hu[redacted] rights, may yet trigger [redacted] with China over Taiwan [redacted] Hong Kong. Beijing is alr[redacted] doing a slow burn over leg[redacted] tion passed this spring [redacted] urges lifting restraints on [redacted] arms sales to Taiwan. The[redacted] ministration opposes both [redacted] shift and mounting cong[redacted] sional calls to upgrade rela[redacted] with Taiwan. But the Chi[redacted] may not appreciate the dis[redacted] tion between the executive [redacted] legislative branches and [redacted] complain about U. S. medd[redacted] in sensitive matters. Anc[redacted] potential dispute: Electio[redacted] Hong Kong next year [redacted] rekindle congressional pres[redacted] for democratic reforms in [redacted] British colony—which C[redacted] would resent bitterly as i[redacted] sumes control by 1997.

But barring another Tia[redacted] men-like crackdown, U. S.-C[redacted] relations seem headed for a new lev[redacted] maturity. No longer will the two s[redacted] roll the dice every year and put [redacted] very heart of their economic rela[redacted] ship in doubt. But dramatically exp[redacted] ing U. S. economic, security, and c[redacted] matic engagements with China will [redacted] U. S. attention focused on the Mi[redacted] Kingdom. That might just mean [redacted] Americans will pursue a mix of se[redacted] terest and idealism with renewed v[redacted]

By Amy Borrus, with Douglas [redacted] brecht, in Washington

FLASHPOINTS THAT REMAIN

TRADE AND INTELLECTUAL PROPERTY

China's $23 billion surplus is growing. U.S. must decide by July whether to cite Beijing for pirating software and patents.

GATT

The U.S. must decide whether to support China's bid to join the international trade organization.

SECURITY

The U.S. will look for clues as to whether China is willing to put pressure on North Korea's nuclear program.

TAIWAN

If Congress keeps pushing for better relations with Taiwan, it could inflame Beijing.

TOKEN SANCTIONS: WILL BEIJING RETALIATE?

HONG KONG

As China takes over, will elections and a free press be allowed?

HUMAN RIGHTS

China must decide whether to allow the International Red Cross to visit its prisons.

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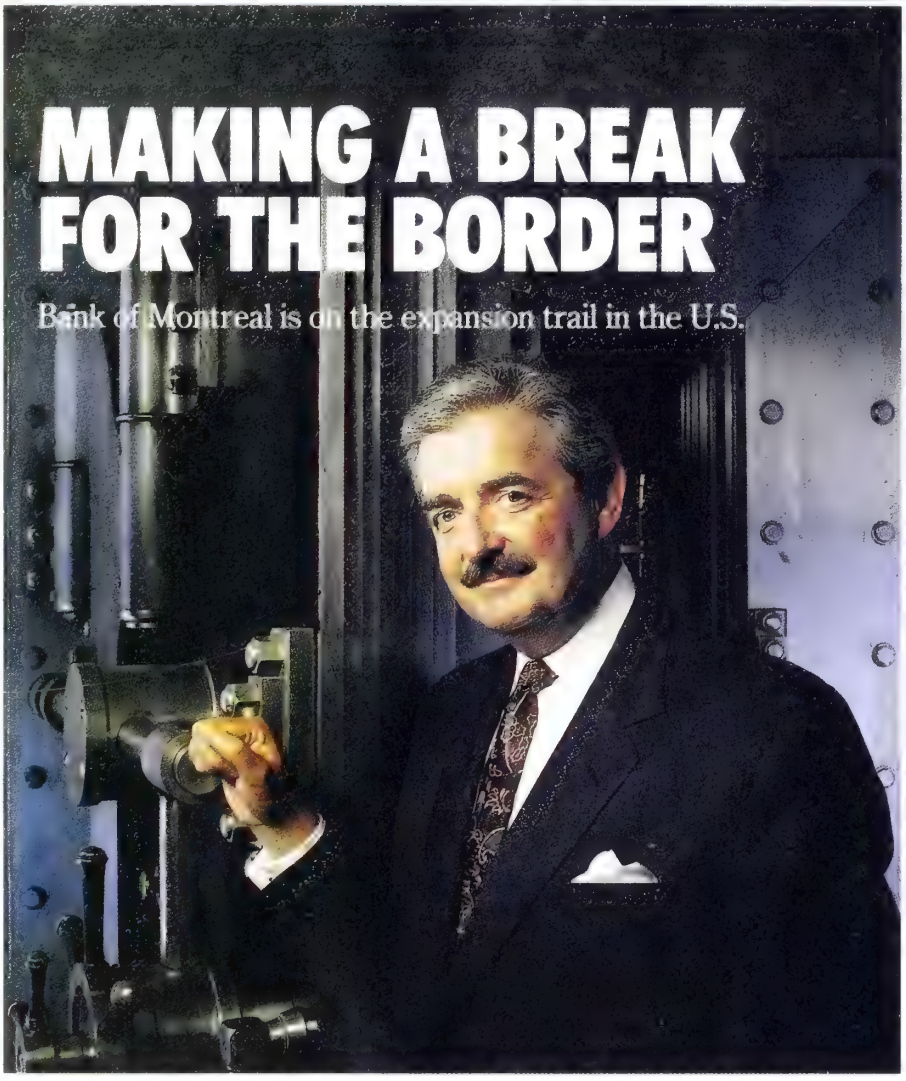
BANKS

MAKING A BREAK FOR THE BORDER

Bank of Montreal is on the expansion trail in the U.S.



SOUTHWARD HO: BARRETT WANTS THE BANK TO EARN HALF ITS KEEP OUTSIDE CANADA

Until recently, stodgy Harris Bankcorp Inc. seemed content to play the wallflower at the bank-consolidation party under way in Chicago. But now, Harris is barging onto the dance floor. In April, it announced it would acquire Suburban Bancorp Inc. for $246 million in stock, thereby becoming Chicago's third-largest retail banking franchise. Meanwhile, Harris is undercutting rivals on loan rates and running ads promising discounts on loans to small businesses.

Why all the activity? Since passage of the North American Free Trade Agreement, Harris' parent, Bank of Montreal, has been pursuing a bold plan to build "the first truly North American bank," according to Chief Executive Officer Matthew W. Barrett. Having cleaned up and improved the finances of the parent bank since becoming CEO in 1989, he aims to get Harris moving and prepare a major push for expansion. Barrett vows to grab 12% of the Chicago market by 2002—triple 1993 levels. Bank of Montreal is also beefing up corporate-banking activities in Mexico. Ultimately, Barrett wants his bank to earn at least half its net income outside Canada, up from roughly 25% now.

If it works, Barrett's strategy could transform Bank of Montreal, which is already North America's 10th largest, into one of the continent's dominant banks. His approach could cause other big banks to reconsider their strate

> By juicing up its Harris Bankcorp unit in Chicago, BofM aims to build "the first truly North American bank"

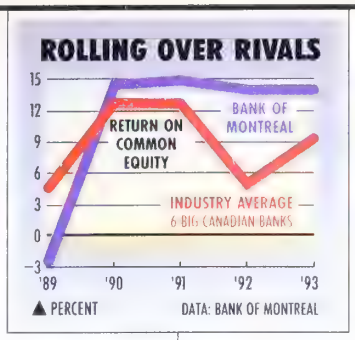
The NAFTA gambit has a lot of lo as Barrett sees it. With companies fr Wal-Mart Stores Inc. to Detroit's B Three busy building continentwide fr chises, it makes sense for a bank to ll low its customers and build a franc of its own. Barrett says the bank's bi reach will lure customers from No America, Europe, and Asia. Bank fi cials say that having a presence in vibrant economy of the upper Midw is particularly useful. And by owni U. S. bank, BofM can offer more co rate-banking services than most o foreign banks—from lending to ch processing.

In a way, Barrett had no choice bu head south if he wanted to grow. fragmented U. S. market offers more portunities for expansion than Can where the top six banks control n than 80% of the market.

OUT-OF-TOWNERS. Bank of Montreal must prove it can successfully exe an ambitious expansion, however. der Barrett's predecessors, BofM mi a golden opportunity to steal a marc Chicago by letting Harris languish nearly a decade after acquiring i 1984. Now, the Chicago market is more competitive: First Chicago cleaned up its act, BankAmerica has quired Continental, and a host of ou town players have entered, inclu NBD Bancorp, Banc One, and the Net lands' ABN-AMRO Holding, which o La Salle National. "The time when H ris could [capitalize] on Bank of M treal's global reach and credit ratin gone," scoffs Marcus W. Acheson IV ecutive vice-president at Continen Even Alan G. McNally, who took ov CEO at Harris last fall, concedes: "T was a huge potential that wasn't ploited with the same intensity as day." In Mexico, where BofM was a jor lender in the early 1980s, the ba now moving more cautiously than s U. S. banks.

Harris still lags behind many o rivals. And competitors aren't eage cede ground. "We're going to do wha er it takes to preserve and expand niche," says David Rudis, executive president at La Salle.

Bank of Montreal is trying to m up for its past lassitude. Harris' Su ban deal alone will give it 72 bran putting it well on the way to its ta of 120 branches and 1 million Chicag tail-banking customers. McNally, built a strong reputation running B of Montreal's retail operations in Ca plans to build as many as 27 additi branches. He is planning further ac



, backed by Bar- s pledge to spend million. Bank of real also plans to Harris to expand its rate-banking busi- In addition, Bank ntreal is drawing ie skills of its Ca- n investment-bank- ubsidiary to ven- into U. S. invest- banking. McNally believes that the ands of corporate customers with oss-border businesses will welcome ık with a strong presence in both . S. and Canada.

DLIEST BUSINESS." So far, so good. der Schneider National Corp., a pri- held trucker in Green Bay, Wis. eider first borrowed from Harris ears ago. Harris then took Schnei- o Bank of Montreal for cash-man- ent services in Canada, where Bank ntreal systems mirror the ones s uses in the U. S. Bank of Mon- has now assigned an account man- to handle the personal accounts of eider employees in Canada. "This nlines our operations and saves a time," says Steven L. Crear, assis- reasurer. "We don't have the time est in a complex set of different ıg relationships." Similarly, Robert sing, chief financial officer of Prem- c., a Toronto-based doormaker with . S. operations, says his company is ıg with BofM despite having been by other banks because the others major U. S. presence.

Mexico, Bank of Montreal's aims arrower. Unlike some big U. S. , it has no plans to open a sub- y in Mexico. But with Mexico's ec- c-reform program under way, "we as a high-growth area for the says Barrett. He plans to expand ate and investment banking there, ing treasury services and trading. of Montreal is already expanding lines to companies to finance trade ctions between Canada, the U. S., exico.

nyone should know the bank's ths and weaknesses, it's Barrett. rted his Bank of Montreal career ıdon, as a teenage clerk fresh out ol. At the time, he wanted to be a and says that banking "looked e deadliest business in the world." ter he was transferred to Canada, in love with the relationship na- the banking industry—and with a employee, Irene Korsak, who be- is wife. Although he never went ge, Barrett's problem-solving abil- t him on the fast track by age 35. s 45 when he became CEO in 1989. n Barrett took over, Canada's old- est bank had been drifting for years. Its costs were among the highest in the industry, while market share and morale were down. Barrett immediately set off on a barnstorming tour of the bank's operations, during which he established a rapport with employees that was in marked contrast to his aloof predecessor. It worked brilliantly to boost morale, says one manager. His goal has been to rank among the top two Canadian banks in every key financial measure, and he's very nearly there. Barrett has slashed expenses and cut credit losses from a sky-high 2.2% of total loans in 1989 to 0.94% last year. The result: four straight years of rising profits, capped by last year's record $510 million.

Skeptics wonder if Barrett will succeed in his bid to create a North American bank. But he's convinced banking will eventually be consolidated along North American lines. As this happens, other Canadian banks will "face a stark choice," he predicts. They'll either have to adopt North American strategies of their own or "resign themselves to becoming, over time, essentially regional banks" that could end up being swallowed by one of the emerging U. S. giants. For Barrett, that isn't much of a choice.

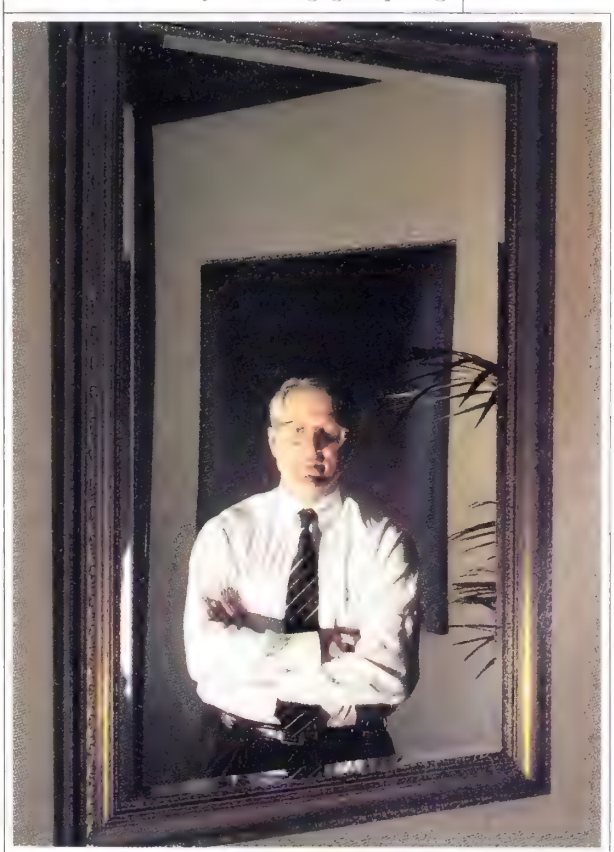
By William C. Symonds in Toronto and Richard A. Melcher in Chicago

MORTGAGES

FANNIE MAE HAS BEEN WEARING HER THINKING CAP

Some fire-sale shopping is just one example of cool-headedness

For most players in the residential mortgage market, this era of rising interest rates is beginning to take on a passing resemblance to Gehenna. With rates on 30-year mortgages spiking and expectations of even higher ones to come, lenders have been dumping their fixed-rate loans at fire-sale prices. And investors in mortgage-backed securities, who had bet on lower rates, have sustained fierce losses. With those players pulling back, the demand for mortgages has plummeted further. But the Federal National Mortgage Assn., which buys one out of every four mortgages made today, is riding high.



JOHNSON'S PUSH ON LOW-INCOME LOANS WAS A PR COUP

As the markets went through spasms, Fannie Mae was bargain-hunting—a strategy that will help it boost profitability even as total growth of its investment portfolio slows compared with last year's explosive volumes. In March, Fannie Mae cut deals to buy $8.7 billion worth of loans on single-family homes and apartment buildings, a stunning 79% hike from February. When market turmoil provides an opportunity for profits, "we go after it," says Fannie Mae Chairman and CEO James A. Johnson.

Indeed, despite the nasty spike in rates and withering of the refinancing boom, the federally char-

tered Washington (D. C.)-based company is poised to post double-digit earnings increases this year, as it has for the last 25 quarters. But Fannie Mae's record goes far beyond market savvy. As housing lenders come under increasing scrutiny for ignoring low-income families and minorities, Fannie Mae has also demonstrated political acumen. To assuage lawmakers and regulators, the company has launched a $1 trillion initiative to promote home ownership among low-income families. "Their record for managing all these risks is absolutely platinum," says Sanford C. Bernstein & Co. analyst Jonathan E. Gray. Fannie Mae's opportunistic shopping helped send first-quarter earnings for this year up 15% over the same period in 1993—a stunning performance given the violent changes in interest rates.

CLUMSY START. Fannie hasn't always been such a consistent money machine. Created in 1938 by Congress to help provide capital to the housing market, Fannie Mae buys mortgages made by banks, thrifts, and brokers and either holds them for investment or sells securities backed by the mortgages. After becoming a public company in 1970, Fannie Mae stumbled badly with poor interest-rate risk management and shoddy credit controls. David O. Maxwell, who took over as chairman and chief executive in 1981, changed all that. The company, which had been losing $1 million a day, overhauled its credit standards and matched the maturities of its assets and liabilities far better. It was a remarkable turnaround. Last year, the company made $1.9 billion on $16 billion in revenues. And a $1,000 investment in Fannie Mae stock in 1981 is now worth about $30,000.

Fannie owes its success to some smart balance-sheet maneuvering. In 1988, the company began developing a market for callable debt, which gives it the right to pay off the debt before maturity. Fannie pays a slightly higher rate than it otherwise would to compensate investors for the risk of a call, but Fannie starts out with a built-in rate advantage—its debt is backed implicitly by Uncle Sam. Currently 58% of its $164 billion in debt is callable.

Fannie Mae's flexibility was critical during the recent refinancing boom. As homeowners rushed to lock in lower rates, Fannie Mae was forced to replace older, higher-yielding mortgages with loans that earned less interest. So it did some refinancing of its own to protect the margins on its $200 billion portfolio of mortgages. Fannie called $13.6 billion of its debt and replaced it at last year's lower rates. If rates still climb, the company simply won't call in more debt and can extend the average maturity of its borrowings. Analyst Gray figures the refinancing and savvy purchases will send earnings to $2.1 billion this year.

Even the growing pressure to help finance lending in potentially less lucrative areas isn't likely to dim Fannie Mae's prospects. In 1992, Congress passed legislation requiring tighter oversight of Fannie Mae and Freddie Mac, another secondary market corporation created by Congress. For Fannie, this included new targets for the business they do with underserved markets.

Even before Congress acted, Fannie was burnishing its political image. In 1991, Johnson, a former managing director at Lehman Brothers Inc. and one-time aide to Vice-President Walter F. Mondale, established a business divi to try to find ways to buy more loa poor neighborhoods and capital-sta rural communities. The division—w has its own building across from nie's headquarters—has also started grams aimed at buying loans on a ments that house poor families mortgages on homes for disabled pe

In March, the company annou with great fanfare that it would pro $1 trillion in financing over the re the decade for these groups. In fact, company concedes that $850 billio that money would already be avail under Fannie's current guidel But the program has been coup for Fannie, winning pr from Congress and the Hou & Urban Development Dept. applaud the initiative," says Assistant Secretary Nicola Retsinas. "Now, we look forw to a fleshing-out of the plan.

TEST RUNS. The details of the demonstrate once again the pany's business and politica nesse. The riskiest of the businesses—such as loans just a 3% down payment—wi tested in a series of small p before being rolled out na wide. And the company is gressively exploring partners with local housing authori nonprofit housing groups, mortgage insurers to spread risks on some of these loans. an R&D effort," says Ann D. gan, Fannie's chief credit off "We don't want to expose selves to large losses."

The timing of the initia couldn't be better for Fa Mae. Its back-office operat are automating some of the d cative steps in the mortgage cess. Johnson figures the new softw and network systems will cut $1,00 of the cost to originate an average m gage. These advances will make smaller loans generated by the lo come initiative more profitable. Fannie Mae will also earn fees w originators use the new system. can ensure our competitive position when all is said and done, have a m efficient housing-finance system," J son insists.

By homing in on such win-win op tunities, Fannie Mae will continue t as popular on Wall Street as it i Washington. And if rates stabilize housing activity picks up, the comp will truly be holding a first mort on Easy Street.

By Amy Barrett in Washin

HOW FANNIE MAE IS NAVIGATING IN TUMULTUOUS WATERS

	CHALLENGE	RESPONSE
INTEREST RATES	Rising rates choke off the refinancing boom and could squeeze margins.	Through the use of callable debt, Fannie refinanced its debt to better match its assets and liabilities.
POLITICAL HEAT	Pressure is mounting from Congress and HUD to become more socially responsible in lending.	Fannie announces a $1 trillion initiative in March to lend to low- and moderate-income borrowers over the next decade.
CREDIT RISK	Moves into low-income lending could send credit losses soaring.	Fannie does the riskiest new business in a series of small pilots. Plans to look for partners who will share risk of any potential losses.

Thanks in part to better credit standards, Fannie Mae made a tidy $1.9 billion last year

'S A FUND-EAT-FUND ORLD

easingly, big players are trying to swallow up smaller companies

Market jitters are causing some investors to lose their taste for mutual funds. But to those wn fund-management companies, ose who would like to, the idea of fund companies looks more appe- than ever.

new mantra in the fund world vival of the biggest." A mix of sing expenses and downward pres- n sales and man- nt fees has raised ar for staying in siness. Fund com- figure they'll need t $10 billion in as- y the year 2000 to er. Right now, are only 37 com- with assets of $10 or more and 232 nies with less than on.

aller companies unted on the con- buying binge of ast few years to rowth may now r how they'll get ets to reach econ- of scale. In recent s, inflows to stock ave dropped, and unds actually have d net redemptions. Many fund nies may not have any choice but out or merge with others.

BUZZ. GE Capital Corp.'s hot pur- Kemper Corp. and its prized billion mutual-fund family has fu- uch of the growing merger buzz. e used to say you could never do uisition on a hostile basis, but GE anged the tone of the industry," I. Bruce McEver, president of ire Capital Corp., an investment pecializing in asset-management nies. "If GE gets Kemper, will e far behind?" asks John Keefe, of ant Keefe Worldwide Information es. AT&T declined to comment.

most active fund buyers, howev- y be banks. With slow growth in re lending business, banks are ing their own funds, and many doubt want to acquire mutual- ompanies as well. Mellon Bank $1.8 billion acquisition of Dreyfus Corp.—which is expected to close this summer—is just the beginning. Among the 30 largest banks, notes James M. McCormick, president of First Manhattan Consulting Group, "nearly all have mutual funds and money managers on their radar screens."

Many deals will be driven by the need to add to a product line, build on increasingly important brand-name recognition, or find new channels of distribution. There is talk that Benham Group, whose $10 billion in assets is mainly in fixed-income funds, may do a deal with Twentieth Century Cos., whose $26 billion is mostly equity. Both companies declined to comment.

The need to grow is especially important to the no-load fund families, which use advertising, not brokers, to reach investors. The more assets under management, the more money that can be spent on advertising and the huge systems needed to support the increasingly sophisticated customer-service networks.

Independent load funds—those not affiliated with brokerage firms or other sales forces—have problems, too. Increasingly, they have to compete for the limited "shelf space" at securities firms and banks that sell their own and others' funds. "There's a bottleneck in fund distribution," says Kenneth R. Liebler, president of Liberty Financial Cos., which runs $7.5 billion in load and no-load fund groups. "There are more funds than places to sell them."

GOOD FITS. Companies on the prowl for acquisitions include Oppenheimer Management Corp., a $30 billion company that figures it must hit $100 billion in assets by 1998 to be a major player. "We can get to $60 billion through internal growth, but we're going to have to acquire the rest," says Chief Executive Jon S. Fossel. Kansas City Southern Industries Inc., which is upping its holding of Berger Associates to about 80%, is a likely acquirer of no-load equity funds. Even Vanguard Group's tightfisted chairman, John C. Bogle, says his firm, the No. 3 fund company, will be "selectively active" in acquisitions.

Some smaller companies want to play the acquisition game, too. Lexington Management Corp. has only $1.5 billion in mutual funds but has a corporate parent, Piedmont Management Co., with money to spend on acquisitions. "We don't wait to hear that a company is on the block," says Lawrence Kantor, a Lexington managing director. "We'll approach a company if we think there's a good strategic fit."

All this mergers-and-acquisitions activity could result in an ironic twist: In the fund business, a company's growth may not come so much from its stock- and bond-picking prowess but from its ability to make smart acquisitions of other fund companies.

By Suzanne Woolley and Jeffrey M. Laderman in New York

THE HUNTERS AND THE HUNTED

HUNTERS	TARGETS
GE CAPITAL Firm is in hot pursuit of Kemper and its $45.5 billion fund family. Win or lose, GE is expected to continue on the acquisition trail.	**BENHAM** The $10 billion fixed-income family has held discussions with Twentieth Century Cos., a $26 billion fund family known for its equity holdings.
KANSAS CITY SOUTHERN INDUSTRIES The 81% owner of $16.5 billion Janus Capital recently upped its holding in $2.3 billion Berger Associates and seeks new acquisitions.	**COLONIAL GROUP** Top executives nearing retirement age may choose to sell to a deep-pocketed buyer. The $14.5 billion firm focuses on fixed-income funds.
OPPENHEIMER MANAGEMENT This $30 billion company wants to grow to $100 billion by 1998 and needs to make acquisitions.	**GT GLOBAL** International boutique would be a prize for buyers that want to expand their business into the fast-growing international fund arena.

DATA: BUSINESS WEEK

More and more banks are launching their own fund families and looking to acquire others

BY JEFFREY M. LADERMAN

THREE IPOs THAT'LL LET YOU IN ON THE GROUND FLOOR

It's hard to find a bright spot in this year's stock market. But Thomas A. Frank, lead manager of the $360 million Dreyfus New Leaders Fund, has a surprising one: initial public offerings. The market slide has let the air out of IPOs. The size of deals has been scaled back—and so have the prices. "We're seeing good companies coming out 30% lower than what was first indicated," says Frank.

Individual investors are getting a shot at new deals, too, since far fewer of the stocks are soaring after their offering. "The flippers [traders who buy hot IPOs to sell for a quick profit] are out," says Frank. "Today's buyers are investors who have done their homework."

Among recent IPOs bought by Frank are Executive Risk, a niche insurer; Cole National, a specialty retailer; and U. S. Delivery Systems, which moves documents and goods for businesses within a local area. All three trade on the Big Board.

What's attractive about Executive Risk, says Frank, is that it's the only pure play in underwriting liability insurance for corporate directors and officers. The insurer was founded by Aetna in the mid-1980s after many other companies fled the field. The company went public on Mar. 15 at 12 and now trades at 12¾—a mere 7.6 times expected 1994 earnings of $1.65 per share and a 16% premium to book value. By Frank's estimation, the stock should be around 17 in year.

BETTER VISION. Unlike Executive Risk, Cole National faces highly competitive markets in its two businesses—selling gifts and eyewear. Cole, a 1984 leveraged buyout, struggled with debt and bad ventures before reshaping itself for its Apr. 11 offering. The stock still trades at its IPO price of 12.

Even after the offering, Cole has $185 million in long-term debt. But Frank believes the improvements in operating cash flow and the benefits from substantial tax-loss carryforwards will help shore up the balance sheet. Frank says Cole's Things Remembered gift shops, which yield 52% of revenue and 56% of income, should increase their sales as more high-priced items

FRANK: "GOOD COMPANIES ARE COMING OUT 30% LOWER THAN FIRST INDICATED"

are stocked. Eyewear is tougher, he adds, but renovation of its leased Sears Roebuck optical departments is helping, as will the expansion of freestanding Sears Optical stores. Frank says Cole could reach 20 in 12 months.

Frank thinks U. S. Delivery, which is still trading at its May 12 IPO price of 10, is the most interesting of the three. The company provides same-day delivery for some 8,700 customers in 22 markets, including 8 of the 10 largest metropolitan areas. The company, which had 1993 sales of $108 million, is the largest single player in a $15 billion-a-year market served by 10,000 small, private companies.

U. S. Delivery's strategy is to buy local operators in much the same way Waste Management turned trash hauling into a nationwide business. The IPO gives the company the means to make acquisitions. Frank estimates that the company will earn 80¢ a share in 1994 and believes the stock could double by next May.

'HELLO. PRESS 1 NOW TO GET A BARGAIN'

Wall Streeters looked askance at Home Shopping Network for years, so it's not surprising that Precision Systems, a 1992 spin-off, had all the allure of a zirconium ring. The outfit that built and maintains HSN's 20,000-line computerized apparatus for answering phones and taking orders has run up big losses in trying to sell its knowhow to the rest of the world.

But some investors are accumulating the stock, which trades over the counter at 2½, betting that the new management and business strategy will pay off. "Before, our entry-level product had 1,056 lines and cost $3 million and you can count on one hand the market for that," says CEO Russell Pillar. Now, Precision has scaled down its starter system, called UniPort, to 48 lines and $90,000, and is enlisting "name brand" equipment makers to help sell it. True, UniPort has to compete with AT&T products. Pillar notes that although AT&T is the largest player, it has only 13% of a $900 million market that's growing 25% annually.

Richard W. West of Gaines Berland, who rates the stock a buy, notes that management has cut overhead from $1.2 million a month to $550,000. The balance sheet is improving, too, with $7 million—about 90¢ a share—in cash, much of it from a $5.8 million convertible-preferred-stock investment from a partnership led by HSN founder Lowell M. Speer. That's a bullish move, since the preferred stock's average exercise price is $5.19 a share. One pro who has been buying the stock expects it to double in the next year.

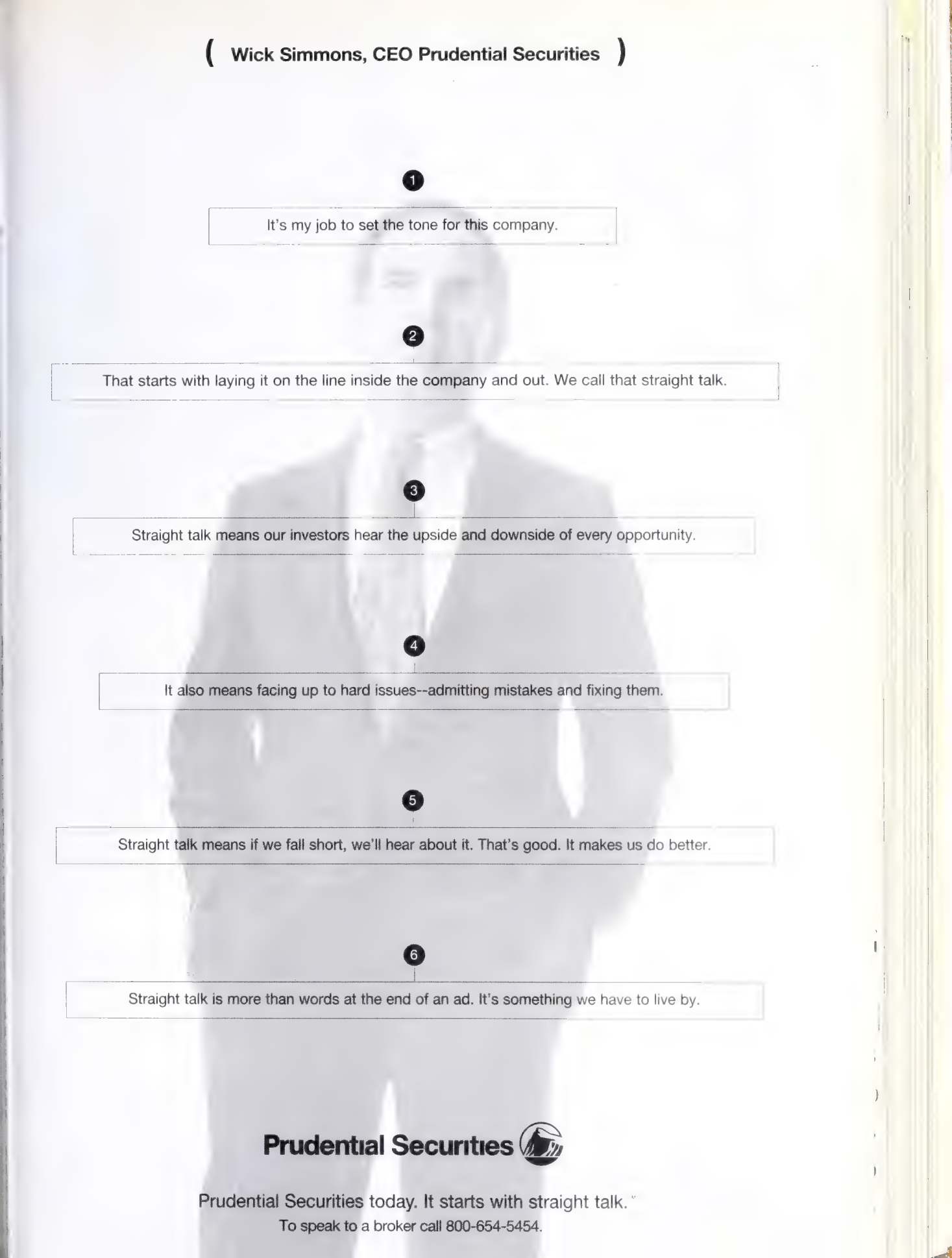
THIS RAIL SUPPLIER IS STEAMING AHEAD

To train buffs, Union Switch & Signal is a throwback to the glory day of railroads. But there's nothing old-fashioned about the Columbia (S. C.) company. US&S went public in 1993, after spending most of its first years as a part of larger companies. And business is just chugging along.

The company designs, builds, and sells systems and components to monitor railroads' cab, wayside, and yard operations—and has a 50% share of the market for such systems. Portfolio manager Walter Row of Salomon Street Research Small Capitalization Growth Fund says the company's prospects are strong. Major railroads, accounting for 30% of sales, are investing big in productivity-enhancing devices.

But that's not all. Row says $1.5 billion in federal mass-transit aid will be spent in coming years on the sorts of systems US&S makes. That's a potential $750 million in sales for a company with estimated 1994 revenues of $8 million.

Row says the stock, which trades over the counter at 18, is cheap. Investors are paying 14 times earnings for a company growing at 25% a year.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BM RIDES INTO MICROSOFT COUNTRY

stner has O.K.'d a major new assault in PC software

ill Gates thought he had a golden opportunity. Seeing IBM's software strategy in apparent disarray, Mi- oft Corp.'s chairman set up a May eeting with James A. Cannavino, a key technical adviser to IBM Chair- Louis V. Gerstner Jr. The Microsoft man was hoping that Cannavino, as head of IBM's personal-computer ion terminated IBM's rocky 10-year ionship with Microsoft in 1990, would ady to forget the bad blood. IBM's in- l software efforts were so disorga- l and ineffective, Gates surmised, he might just persuade Cannavino to again embrace key Microsoft prod- including Windows.

the last minute, Cannavino can- . But the meeting might not have as Gates planned anyway. What he t know was that after months of searching, IBM is set to embark on a bid for the desktop software market Microsoft now dominates. The deci- sprang from recommendations of a force that Gerstner set up to bench- IBM's lagging PC software business against Microsoft. Tellingly, the task force, one of several to assess IBM units, became known as the "seminal task force," say company insiders.

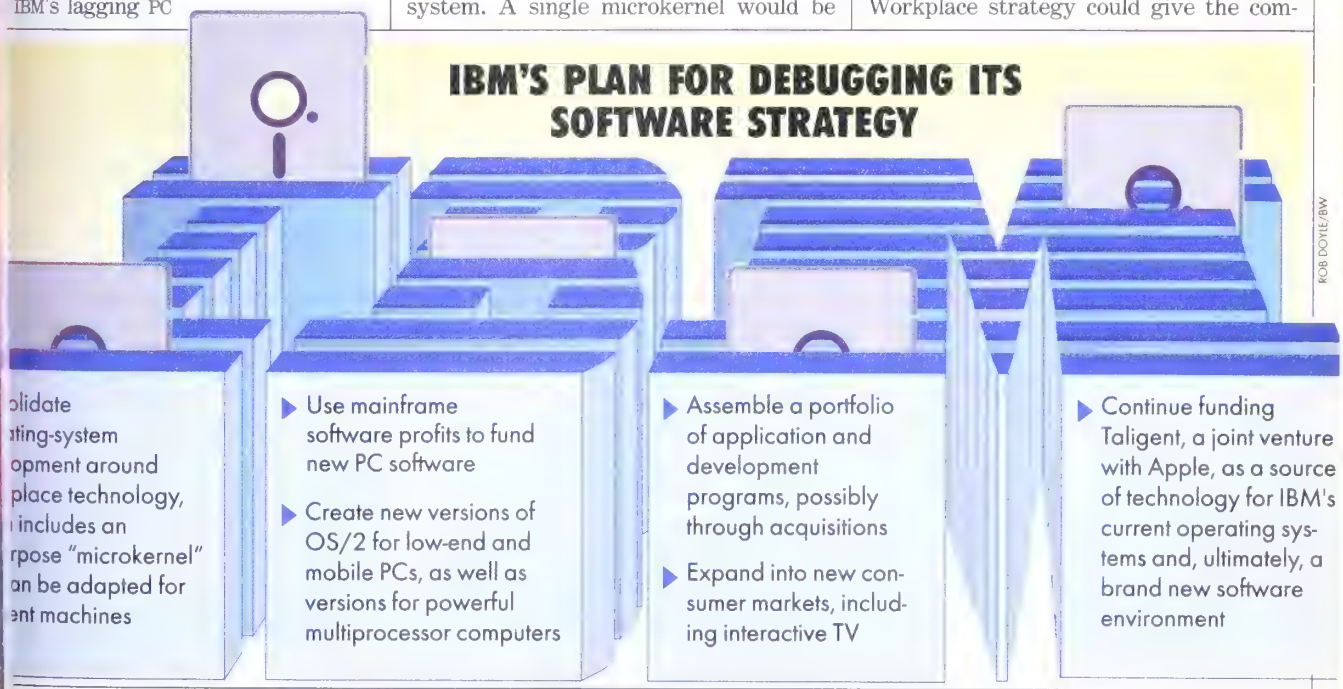
The team, headed by John M. Thompson, an IBM senior vice-president and group executive, reported to Gerstner in early May and outlined several options. They ranged from simply giving up on the critical but frustrating PC-software market to "playing to win"—getting superaggressive and trying to unseat Microsoft. Gerstner's choice: a modified play-to-win strategy that will rely on internal IBM efforts, the help of partners, and possibly acquisitions to get into applications software.

The cornerstone of the PC software effort—and for shoring up IBM's entire software business—is a high-stakes gamble on what the company is calling Workplace technology. The idea is to consolidate all software development around a common "microkernel," a form of software even more basic than an operating system. A single microkernel would be used across different product lines and, with the addition of "personality" software, would mimic existing operating systems, say the OS/400 of IBM's AS/400 minicomputers. Workplace would also include a common graphical interface and a shared set of object-oriented programming languages.

The Workplace strategy makes a full-scale rapprochement with Microsoft unlikely. Indeed, it reflects an opposite impulse: Gerstner's urge to create a more cohesive IBM that reintegrates nearly autonomous business units and encourages them to rely more on IBM technology. He has already brought the renegade IBM PC Co. back into the fold. And he has pushed all IBM units to build new designs around the PowerPC chip and send them out the door with more IBM software.

DUPLICATIONS. Gerstner's long-range strategy is now crystallizing: Up and down the line, he wants IBM to standardize on the PowerPC as basic hardware and Workplace as the core software. By doing so, IBM may solve a persistent problem: eliminating the huge incompatibilities across its product lines. To that end, Thompson is now prepared to reallocate resources from IBM's cash-cow mainframe software business and other software projects to Workplace.

Right off the bat, sharing Workplace technology could save IBM lots of money. Today, IBM creates each feature, say a file system, several times—once for each operating system. That duplication contributes to the $1 billion that IBM, by some estimates, spends on operating-systems development each year. And the Workplace strategy could give the com-



pany a badly needed, coherent software marketing message.

To marshal forces behind Workplace, IBM on May 27 was expected to announce internally a major reorganization of its software-development groups. Says one executive: "You can expect to see the same kind of focus on Workplace as we've put on the System 360," the mainframe architecture that fueled more than two decades of enormous profits for IBM.

IBM even has hopes of making Workplace popular with other computer and software makers. The company is offering to license Workplace technology and says it has some nibbles. Meanwhile, it plans to ship the first products with the Workplace microkernel—test copies of OS/2 for PowerPC—in June.

While Workplace makes a lot of sense, it will be difficult to pull off. "It sounds good on paper, but let's wait and see what it looks like in the flesh," says Stephen Smith, a PaineWebber Inc. analyst. First, it could be years before IBM can create a single microkernel that works on everything from PCs to mainframes. And even if it can, there are questions about how fast the resulting programs will run. In the meantime, IBM could lose vast chunks of its $11 billion software empire, still tied largely to mainframes. With mainframe sales declining, "those revenues are at risk," says Smith.

JUMPING SHIP. The idea of getting the PC industry to embrace Workplace also might be a bit of a stretch. Ever since it handed over the PC operating system to then-partner Microsoft in 1980, IBM has been in a catch-up mode. In recent years, Microsoft's Windows has sold 50 million copies, compared with 5 million for IBM's OS/2. And Microsoft is tenaciously going after the market for server operating systems, software that allows powerful PCs to serve up programs and data to networks of desktops. OS/2 has its firmest foothold in servers, and Microsoft's Windows NT has not been a big hit. But industry watchers expect NT to catch on eventually, perhaps beginning with an update due later this year.

In the near term, IBM plans to counter with new versions of OS/2. Some will be scaled-down versions for portable PCs and for buyers who don't need all the bells and whistles. One will be aimed at large-scale servers, including parallel processing machines using many microprocessors.

None, however, will solve OS/2's biggest handicap: There aren't many applications programs, such as word processors and databases, that work with OS/2. Without them, few customers will ever discover the nifty features, such as pen and speech input, that are built into the operating system. "We need to show the end user the value of the plumbing," says Leland Reiswig, president of IBM's Personal Software Products Div. The lack of applications has led some key customers to jump ship. Sears, Roebuck & Co., one of IBM's biggest accounts, had been a big OS/2 user. Now it plans to switch all of the 5,000 OS/2 computers in its merchandising unit to Windows starting this summer.

To get the applications it needs, IBM is rolling its own. The company's Software Solutions Div., run by Steven A. Mills, in the past year has come out with a half-dozen groupware applications—such as Ultimail, a multimedia mail program, Time & Place/2, a scheduling program for groups, and Visual Age, for building client/server programs. IBM also plans a database to compete with Microsoft's Access and FoxPro databases.

Partners can help, too. IBM is expected to seek more allies, such as Lotus Development Corp., which sells versions of its popular Notes groupware and SmartSuite office programs for OS/2. And Mills says IBM is not ruling out acquisitions. He won't comment on specifics, but the company is believed to have Borland International Inc. on a list of possible targets.

Another new effort is aimed at consumers. In a software store you have to look pretty hard to find OS/2, much less applications for it. "Customers turn to us

> Getting the PC industry to embrace Workplace might be a bit of a stretch

to knit their departments together, but on one-by-one sales," IBM has less presence, says Mills. So IBM is gearing up for a big push into stores, he says. And by next year, PSP hopes to have hot new products, such as software for interactive TV.

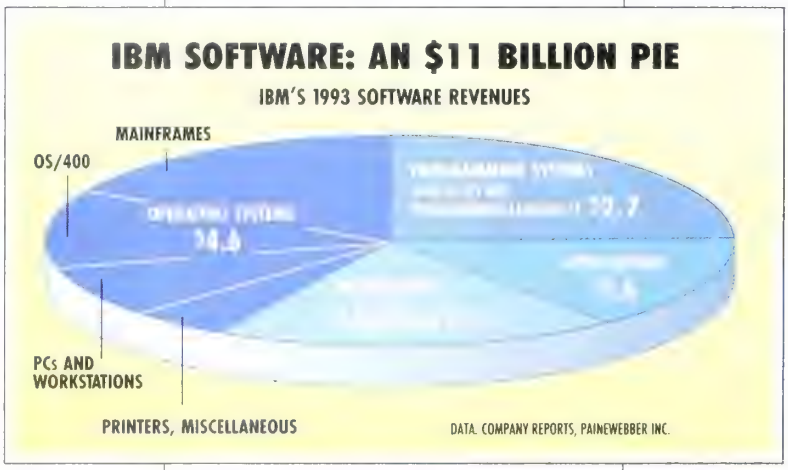
For now, IBM's decision to focus on Workplace raises questions about other efforts. The fate of AIX, IBM's version of Unix, is now up in the air. No AIX "personality" is planned for the Workplace microkernel. Another unknown: the role of Taligent, IBM's pricey joint venture with Apple Computer Inc. Taligent's original mission was to create a new object-oriented software environment for mid-1995. Now, IBM plans to add bits of the Taligent technology to programs such as OS/2 and create a Taligent "personality" on the Workplace microkernel.

LATE HOUR. But Taligent is late for a critical IBM deadline: The computer maker plans to release a version of OS/2 based on the Workplace microkernel in early 1995 and wants to include some Taligent object-oriented programming. Taligent says it won't be ready. "If we miss that window, we'd have to question the Taligent investment," says one IBM exec. The answer could be painful: IBM just ordered sharp cuts at Kaleida Labs, its unproductive multimedia software venture with Apple.

Ultimately, IBM's biggest problem comes back to Microsoft. By yearend it plans to ship Chicago, a major update of Windows. OS/2 runs current Windows applications. But because its technology-sharing agreement with Microsoft expired last September, IBM must do its own programming to make OS/2 compatible with Chicago. What's more, Chicago will nullify many of the advantages OS/2 now has. Says Rick Sherlund, an analyst with Goldman, Sachs & Co.: "When Chicago ships, OS/2 becomes superfluous."

Despite Gerstner's continuing efforts, some factions within IBM would agree. The IBM PC Co., for example, ships millions of copies of Windows—and relatively few copies of OS/2. "Some groups are putting more resources into supporting Microsoft than IBM," grouses one development manager. "Now, Gerstner is trying to say: 'Meet IBM's goals, not Bill's your own.'" But if IBM's top goal is selling what the market wants and quickly restoring profits, maybe Bill Gates can find a receptive ear after all.

By Amy Cortese in New York



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MAKING THE MIDDLEMAN AN ENDANGERED SPECIES

Massive computer networks are shaking up long-standing power relationships

You've cracked your windshield and you need it replaced. So you call the 800 number on your insurance policy to make a claim. You may not realize it, but that call is likely to connect you to one of several networks of glass installers, which are connected by computer to your insurance company. This electronic connection saves you time and your insurer big bucks because now it doesn't have to cut a separate check for every claim; it can pay hundreds at a time. The only party that doesn't benefit may be the local auto-glass shop: If it isn't part of such a network, it stands to lose a major chunk of business—and find its profit margins eroding because the insurers' buying clout has driven prevailing prices down.

Auto glass is only one of dozens of businesses where computers and communications networks are changing long-standing supplier-buyer relationships. By linking suppliers and consumers more directly, computers can help eliminate intermediaries, collapse inefficient supply chains, and send business directly to predesignated "preferred providers." Indeed, that is what's happening in health care. Today's managed-care networks, and the Clinton Administration's proposed regional buying co-ops, could radically rearrange how patients, doctors, hospitals, and insurance companies relate—and how much each gains from its dealings with the others.

UP IN ARMS. Such power can be upsetting, if not downright life-threatening, to established players. The glass networks, which began with a 1990 project by the Globe Glass & Mirror Co. chain for Allstate Corp., have hundreds of small shops in the $2.3 billion replacement-glass business up in arms. "What was good business for Globe turned out to be a nightmare for the small independent glass-shop owner," notes Philip J. James, president of the National Glass Assn.

Independent auto-glass suppliers, which have either been excluded from or chosen not to participate in the insurers' networks, have banded together to push legislation to outlaw compulsory use of preferred providers. They argue that insurance companies should not be allowed to tell policyholders where to get service. "Our biggest problem is we're being denied access to the insurance market," declares Ken Custer, a Minneapolis glass installer who also publishes an industry newsletter. Laws protecting the independents are on the books in two dozen states, including South Dakota, but most have had no bite. Allstate has sued to have the South Dakota law thrown out.

Information technology has hit the compact-disk industry in a differer equally momentous way. In 19 Hartsdale (N.Y.) startup called S Scan Inc. began tracking CD sales tronically at checkout counters. Its now covering 14,000 stores, was th truly accurate accounting of actual For decades, merchandise buyers, stations, and consumers gauged was hot and what wasn't by *Bilbo* magazine's weekly surveys. But its ings, compiled from phone inter with store owners, were subject t tortions, including attempts by companies to influence results sales—by offering participants free trinkets, and trips. *Billboard* Char rector Michael Ellis says inaccu sprang more from haphazard rep by stores than from influence ped

Now, *Billboard* and the rest

IN THE CD INDUSTRY, CHECK-OUT DATA HELPED PUT SMALL LABELS ON THE MAP

rd business are relying on Sound-
, and accurate data are having a
erful effect. One of the most striking
veries has been that country music
r more popular than many record
utives had assumed. As a result,
re promoting country singers much
heavily. Another change: Small
abels, such as Priority Records that
never match the marketing spend-
f bigger brethren now can get rack
because the SoundScan numbers
the demand is there.

short, instant access
curate data "totally
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ry," says John H.
aduke, chairman of
rn Merchandisers,
supplies 1,000 Wal-
and owns Hastings
•Music•Video, a 92-
chain. "The labels
un the business; the
are running after the business."
prime example of how, as Glover
son, director of research at Ander-
nsulting, puts it, information tech-
can "help make marketplaces oper-
oser to how classical economic
says they should"—by giving play-
tter information upon which to act.
change has actually been good for the record giants, too. They have been able to slash their return rates, and they no longer have to load up retailers with discounted disks. "We never truly knew what sales were at the counter," notes Lou Mann, senior vice-president for sales and distribution at Capitol Records Inc. "We probably continued to spend on a record two, three, four weeks after we should have." Even if the big labels have lost a little clout, their profits have been helped.

Just collecting data is only part of the new power equation, though. Supermarkets, for example, have been capturing scanner data for years. But it has been mass-merchandising chains that figured out how to use such data most effectively. Between 1985 and 1992, notes J. Mark Harran, a senior vice-president at Kraft General Foods Inc., outlets such as club stores, mass merchandisers, and deep-discount drug chains took seven to eight points of food sales away from traditional supermarkets—a massive shift in such a slow-growth business.

A major edge was information, and Wal-Mart Stores Inc. was the trendsetter, using computers to take the guesswork out of wholesale buying, slash inventory cycles, and keep popular items in stock. Wal-Mart turned the tables on the suppliers, telling them what products it wanted, where and when, and driving them harder than ever on prices.

Now, supermarket chains are hoping to emulate Wal-Mart's efficiency. Early last year, consulting firm Kurt Salmon Associates Inc. released a study concluding that grocers could cut their costs—and prices—by 11%, or more than $30 billion a year, by moving toward paperless links with their suppliers. The scheme, dubbed Efficient Consumer Response, would mean more effective merchandise assortments and store promotions and eventually a continuous replenishment of shelves based on what's actually sold each day.

It won't be an easy transition, however. The big players in the grocery business—particularly wholesalers—make much of their money by stocking up on discount merchandise that the manufacturers offer. Fleming Cos., for instance, a $13 billion food wholesaler, makes roughly a third of its profits through such forward buying. The big discount deals would be cut sharply under ECR. And even if ECR eventually brings Wal-Mart-like efficiency, nobody wants to give up today's profits first. That's a major reason why progress toward this much needed streamlining has been slow.

New information networks are likely to change power relationships in the air-travel market, too. While travel agents still sell about four-fifths of all U. S. tickets, it's becoming far easier for consumers to book their own reservations over the phone or through on-line services such as Prodigy and CompuServe. And airlines are eager to cut huge distribution costs.

BOOSTING THE SHARE. "Technology and the information highway will present travel providers with more realistic options and techniques for selling their products and services," declares Jeffrey G. Katz, president of AMR Corp.'s SABRE Travel Information Network, the marketing arm for SABRE, the largest travel reservation system. Those methods could include desktop computers and interactive television networks to allow consumers to book flights, hotels, and even entire vacations with the help of software that mixes full-motion video, data, and sound.

The American Society of Travel Agents is trying to put the best face on these developments. The group predicts that, rather than eating into agency business, the new technologies will increase agents' efficiency with customers and boost the share of tickets sold through agents. But Nicholas A. Athanasiou, senior consultant at Arthur D. Little, predicts that by the end of the decade interactive systems could cannibalize 20% to 30% of agency sales. "Agents have to find ways to add value in this new electronic environment," he says.

Travel agents have time to prepare for such changes. But as diverse industries from glass repair to recorded music are finding, the rules of the road can be transformed overnight when technology makes a wide turn.

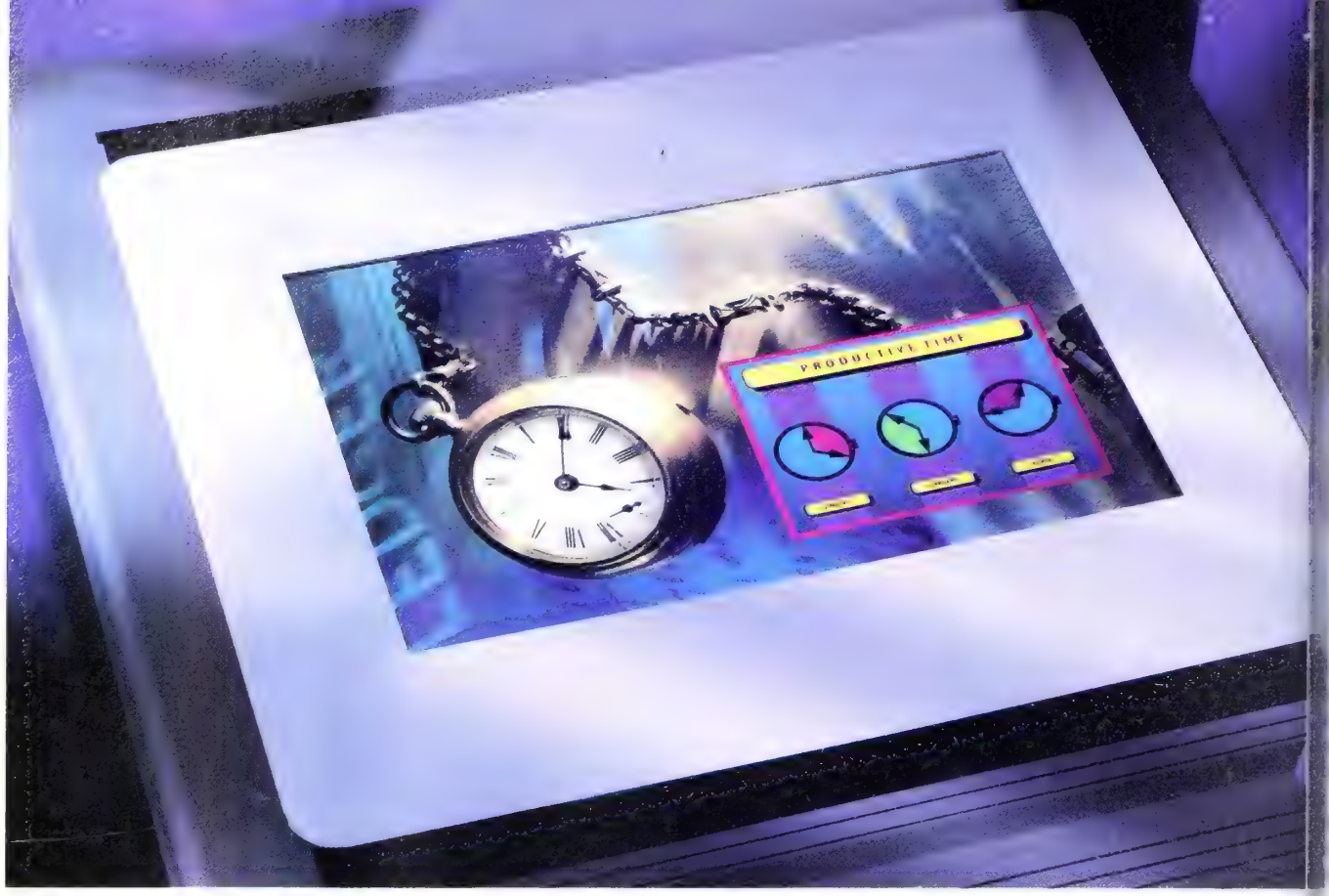
By Zachary Schiller in Cleveland, with Wendy Zellner in Dallas

HOW INFORMATION TECHNOLOGY IS CHANGING THE RULES

FEWER INTERMEDIARIES As consumers make more airline and hotel reservations themselves, using on-line services, they may not need travel agents as much.

SPEEDIER DECISION-MAKING Sifting through volumes of detailed sales data, retailers and grocery chains can determine what's selling best, and to whom, almost immediately.

EQUAL ACCESS TO DATA Accurate, nonbiased information about recorded music sales is now available from an independent source that collects data from 14,000 retailers. Now the industry knows exactly what the hit songs are.



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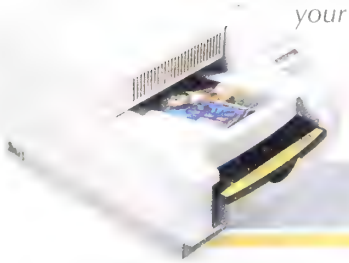


evelopments to Watch

BY RUTH COXETER

IIN FILM CAN WRING RGY FROM THE SUN

Jacques E. Ludman, president of Northeast Photosciences Inc. in Hollis, N. H., wasn't looking for cheap solar energy. His goal was to lighten the load of solar-power systems in space. The secret to efficient solar power is well-known: Focus the sun's rays and split them up into beams of individual colors, so that each beam hits a solar cell engi- for that particular wavelength. But the standard meth- th prisms and lenses—is too heavy for pound-conscious raft.

udman found a lightweight solution: a thin holograph- that uses diffraction to split and focus sunlight. Unfor- ly, the demise of Star Wars dried up much of Lud- potential market. But when government and university sts explored earthly applications, "we found, to our surprise, that what we were doing was capable—on -of producing electricity at 5¢ to 6¢ a kilowatt-hour," n says. That could make solar power cost-competitive nventional power plants.

ING NOT SO SOON TO A GALAXY R YOU: THE QUANTUM COMPUTER

try again. That's the way computers crack a secret e. Searching through billions of trillions of possible kes so long that codes with many digits are, practical- king, unbreakable. But mathematician Peter W. Shor of ell Laboratories has conceived of a shortcut: If at first n't succeed, go quantum. Shor envisions a computer n the rules of quantum physics. In the quantum world, e photon exists in many places at the same time. In computer, many different computational paths would ex- ie same time. The interference of those paths with each ould filter out the answer almost instantaneously.

t go shopping for a quantum computer at Circuit City. work still is just a theory, building on earlier work by holars as David Deutsch of Oxford University and V. Vazirani of the University of California at Berkeley. ior: "The real challenge would be getting the quantum ical behavior working with enough precision to allow compute things accurately." And when might that be? order of decades, I expect."

ING STROKE PATIENTS' N CELLS TO SURVIVE

imizing brain damage after a stroke depends on pre- enting the death of brain cells. As cells die, they re- chemical called glutamate, which overexcites neighbor- , causing them to degrade and release more glutamate, ng an ever-widening circle of brain-cell death.

Several types of chemicals stop the ripple effect by binding to a group of receptors called the NMDA complex. But they can cause side effects such as delirium and aggressive behavior. In animal studies, however, one of these compounds called glystasins inhibited the death of brain cells without side effects. This May, CoSensys Inc. of Irvine, Calif., and Ciba-Geigy Ltd. signed a pact to develop the CoSensys glystasin compound Acea 1021. Trials to evaluate the drug's safety and side effects in stroke victims are scheduled to begin in six months.

A SEARCH-AND-ALERT COMBO COULD HOME IN ON CANCER CELLS

When surgeons remove tumors, they often leave behind cancer cells that can grow and spread. To help round up such stragglers, Neoprobe Corp., a biomedical company in Dublin, Ohio, is testing a technique called radioimmunoguided surgery (RIGS) on patients with colorectal, ovarian, breast, and prostate tumors.

The brainchild of two scientists at Ohio State University, RIGS combines a cancer-specific antibody with I-125, a low-energy radioactive isotope of iodine. The compound sticks to cancer cells and alerts surgeons to their presence when the operating site is scanned by a gamma-ray probe. Neoprobe says the new treatment has translated into longer survival times in the 1,500 patients tested.

Neoprobe is using the same radioactive antibodies in patients with metastatic colorectal or pancreatic cancer to harvest CD4+ lymphocytes, helper cells that rally the body's immune system to fight invaders. In such cases, surgeons remove lymph nodes that have been infiltrated by cancer cells. Then the lymphocytes are isolated, grown in great numbers, and injected back into the patient within 10 days. Neoprobe's gamma-ray probe has been approved by the Food & Drug Administration. Next year, the company hopes to seek approval for the marker compound for use in fighting colorectal cancer.

PLANT CELLS THAT CAN PLUCK POLLUTANTS FROM LIQUID

STUART GOLDENBERG

Talk about green technology. Paul Jackson, a microbiologist at Los Alamos National Laboratory, is using plant cells to purify liquids contaminated with heavy metals, such as barium and uranium, and with the residue of explosives such as TNT.

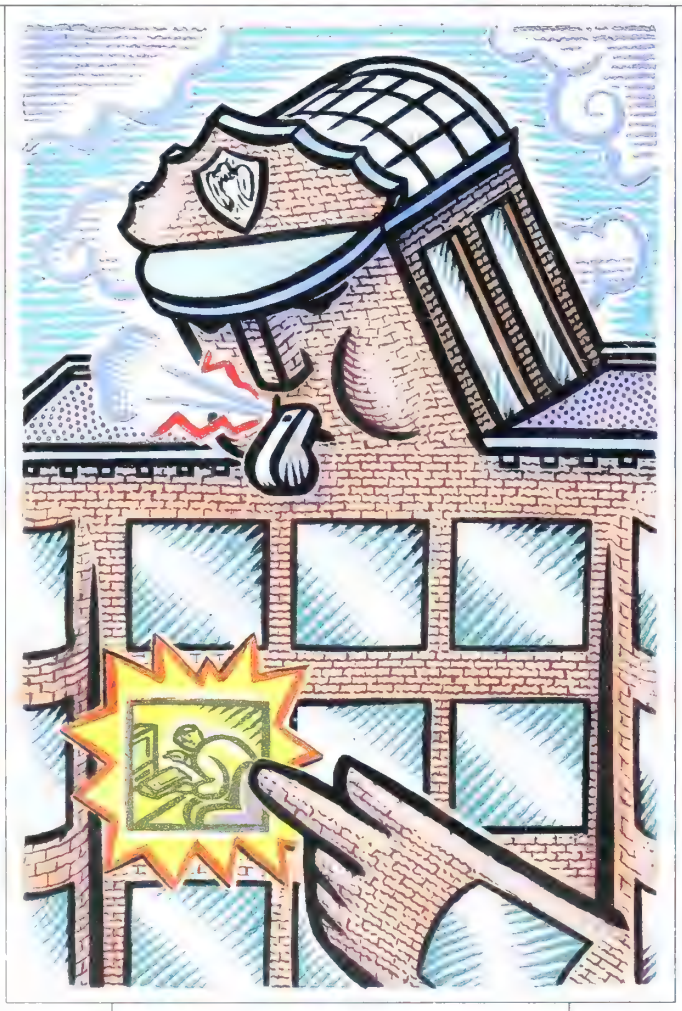
Jackson runs contaminated liquid through a silica-based powder containing cells from citrus, corn, jimsonweed, and other plants. Since certain plants take up some minerals better than others, the mixture of cells is tailored to the contaminants. Like molecular claws, microscopic hooks located on the outside of the plant cells snatch toxins from the liquid. Jackson says lab studies show that contaminant levels are reduced to below federal standards at a rate of a gallon every three minutes. Acids strip metals from the sand and concentrate them in commercial quantities. Several chemical companies are interested in the technology, Jackson says.

WHEN THE COMPANY BECOMES A COP

Full cooperation with prosecutors raises questions about employees' legal rights

For some companies, facing charges of criminal misconduct is tantamount to a death sentence. Federal indictments undid the likes of E. F. Hutton & Co. and Drexel Burnham Lambert Inc. But when Salomon Brothers Inc. was caught in a Treasury auction and government securities scandal in 1992, it emerged from the ordeal virtually intact. The difference: Hutton and Drexel battled prosecutors; Salomon courted them.

Salomon learned a valuable lesson in how to avoid getting indicted. The firm gave the government unrestricted access to virtually everything—company documents and memos, copies of its internal investigation, and employees for interviews. Salomon even agreed to waive the coveted attorney-client privilege, a legal tool that protects the rights of individuals and businesses, just to prove how committed it was to becoming a model corporate citizen. "Salomon set the standard for cooperation," says John K. Carroll, a former prosecutor in the Salomon case, now a defense lawyer in New York. "To be an A-plus cooperator includes waiving the privilege."



NO CHOICE. The strategy worked, and since then dozens of companies have chosen the same course—most recently, Kidder, Peabody & Co. Within days of uncovering a scheme allegedly involving phantom trades in its government bonds department, Kidder announced in April that the firm would cooperate fully with regulators and investigators. Kidder further noted that it had hired Wall Street troubleshooter Gary G. Lynch to conduct a comprehensive internal inquiry into what went wrong. That inquiry, expected to be completed in late June, is likely to become as much a piece of the government's case as it is a part of the company's in-house record. "I don't think we have much of a choice in this situation," says Kidder's General Counsel John M. Liftin. "The way to convince the government that we really [want to cooperate] is to be open with them and let them see everything we see."

But allowing such unhampered—and once unheard-of—access, say critics, comes at a high price. When companies become cops, employees increasingly mistrust their own management. That impedes a company's ability to get to the bottom of alleged misconduct: Employees withhold vital information because they believe that company will sacrifice t save itself. "The motiva those who would oth fess up is completely ished by the likelihoo their information will be available to governmen cials," says David M. Br a New York lawyer wh resents Kidder employ the current probe.

Critics contend tha most dangerous byproc the assault on the att client privilege and ot gal protections is that i the government too mu trol over routine comp fairs, such as keeping o employees. "Do you corporation setting the and legal standards business, or do you w live in a society whe government solely dete what's right and wrong?" asks Paul R. G New York defense lawy

Perhaps the most example of just how fa panies are willing to go pease prosecutors in Prudential Securities which is currently unde inal investigation in Ne for allegedly defrauding tors out of millions of

Contrary to the practice of most nies, Prudential won't advance to current or former employees t legal bills if they assert the Amendment against self-incrimina otherwise refuse to cooperate w government, say lawyers familia the case.

Lee Spencer, Prudential's acti eral counsel, says the company is ating with prosecutors. And in d the corporation's interests mus first. "We have been very strong our desire that employees and one associated with us cooperat Spencer. "We reserve the right

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[withholding legal fees] in light of son's cooperation." Prudential may e to cover these employees when iquiry is completed.

r its part, regulators and prosecu- say complaints about them over- ing their authority are exaggerat- hey note that companies as well dividuals should understand that ooperation is in ev- ody's interest—not the government's— ularly when consu- have been victi- . "What cooperation is enable us to find there is a way to back or diminish a ty," says Richard er, head of the Se- es & Exchange Com- n's New York office. n we have to fight tooth and nail erything, there isn't any incentive r part to be lenient."

R BEHAVIOR. And far from inhibit- corporation's ability to discover tial internal problems, Walker and s say that giving companies a tan- incentive to police themselves has ly improved corporate behavior. "I don't think [companies] cooperating with the government necessarily means that witnesses are going to clam up and be more difficult," says Howard E. Heiss, chief of the securities and commodities fraud unit in the U. S. Attorney's office for New York's Southern District. "Cooperating with the government enhances corporate responsibility and compliance with the law."

The positions that the government is taking these days are mirrored in the federal sentencing guidelines applied to corporations. They make it clear that judges can increase or reduce penalties based on how forthcoming companies have been during investigations.

For the most part, playing ball with the government does pay off. In the case of New York-based Sequa Corp., prosecutors declined to press criminal charges last year even though the company had allegedly performed substandard repairs on airplanes' engine parts. Public records filed by Sequa show that it voluntarily cooperated with regulators and paid a fine to settle the case. Arochem International Inc. also escaped indictment, although the company is now defunct. Arochem even invited FBI agents to interview employees on company premises, says Alan M. Cohen, a New York lawyer who worked on the case.

There is no doubt that the blurring of lines of enforcement between the government and businesses has made life more difficult for many troubled companies. "It's a phenomenon we all have to live with," says Lynch. "There's very little choice but to conduct an investigation." Ultimately, if the result is less scandal and crime, the trade-off is probably worth it.

By Linda Himelstein in New York

MAKING NICE WITH THE FEDS

To avoid indictment or other serious penalties, companies should consider the following steps:

- Promptly volunteer information about internal problems rather than wait for the government to uncover them
- Provide access to company documents and investigations
- Allow prosecutors and regulators to interview employees
- When necessary, waive the attorney-client privilege

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EDITED BY AMY DUNKIN

Investing

NOW, DIVIDEND HUNTERS ARE STALKING REITS

Given the severe ups and downs of real estate investment trusts over the past two decades, it seems incongruous to mention them in the same breath as conservative utility stocks. But with higher interest rates, regulatory problems, and competition threatening the generous dividends of many utilities, investors are increasingly turning to high-yielding equity REITs.

REITs, which acquire and operate apartment buildings, office complexes, and other commercial real estate, are currently offering dividend yields of 6% to 9%. An overload of new issues has pushed prices down about 6% from last September's highs, presenting some attractive buying opportunities. And equity REITs have generally held up better than stocks: Total return this year was 5.18% through the end of April, compared with 2.42% for the Standard & Poor's 500-stock index.

RESURGENCE. REITs are tax-free corporations that pass on at least 95% of their income to shareholders. But they've had a checkered past: Speculative real estate loans caused them to blossom and then crash in the 1970s, while heavy leverage led them to climb and plunge again in the late 1980s. Yet these days, they are enjoying a resurgence because of the recovering real estate market, which has allowed trusts to pick up good properties on the cheap.

The darkest cloud on the horizon for REITs is rising interest rates, which increase capital costs for property owners and could slow growth prospects. So far, though, REITs have shaken off recent rounds of Federal Reserve rate hikes. "Interest rates would hurt only if they rose really high," to, say, around 9%, says Fred G principal at Boston-bas nobscot Group, an adv institutional investors good news, he says, is rates are rising becau economy is impr some REITs in certa tors and areas country, such a Southwest, can rents. Of course wouldn't appl commercial re tate projects are locked int term leases segments still ly recovering.

VESTED INTERI choosing a RE vestment, the critical conce management. operators shou experienced no in buying an ing properties running them. for manage with a subst ownership st 10% or more. " someone's got money in si side with yours tends to min mistakes," says Sotter, a prin with Chicago- PRA Real Esta curities Fund.

Sotter and pros say inve should make there's enough generated by tions to cover dividend outs. Because REITs pa bulk of their earnings shareholders, operating flow—not earnings share—is the most imp measure of a REIT's h Investors should also

of highly leveraged RE-
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ys Samuel Lieber, man-
of Evergreen Global
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o 7%, factory-outlet
such as Horizon Outlet
rs, based in Muskegon,
should rack up 20%-
dividend gains over
ext two years, thanks
developments, expan-

THE PROS' CHOICES

Name/Specialty	Price*	Dividend yield	Total return* Year to date
CAMDEN PROPERTY TRUST Apartment buildings	$24.25	6.60%	-2.20%
CHELSEA GCA REALTY Factory outlet centers	29.50	6.24	10.45
DEBARTOLO REALTY Regional malls	14.75	8.54	NA**
HORIZON OUTLET CENTERS Factory outlet centers	25.50	6.55	12.69
MANUFACTURED HOME COMMUNITIES Mobile-home parks	43.00	5.07	1.27
SIMON PROPERTY GROUP Regional malls	25.75	7.38	15.91
SOUTHWESTERN PROPERTY TRUST Apartment buildings	13.00	6.77	4.71
UNITED DOMINION REALTY TRUST Apartment buildings	13.63	5.14	(1.79)

*4/15/94 **Not available; REIT went public in late April

DATA: REALTY STOCK REVIEW DATABANK; GREEN STREET ADVISORS; PRA Real Estate Securities Fund, COHEN & STEERS; PENOBSCOT GROUP; EVERGREEN REAL ESTATE FUND

sions, and lease renewals at higher average rental rates, Lieber says.

How well factory-outlet centers continue to fare hinges on whether they can stand up to competition from value-conscious traditional retailers. Potential overbuilding is another issue. New development is driving the growth in this sector, which currently includes about 300 centers. An additional 98 are expected to come on line by the end of the year, according to *Value Retail News*, which tracks this industry. "When the development opportunity goes away, investors will have to be ready to jump out," says Barry Vinocur, editor of the *Realty Stock Review* in Shrewsbury, N.J. The current thinking is that the sector has perhaps two to three years of heady growth left.

Another hot REIT area with strong prospects is trailer parks, which the industry prefers to call manufactured, or mobile, homes. While mobile homes don't offer the fat rents enjoyed by office buildings or apartment complexes, they have the advantage of low vacancy and turnover rates. An average manufactured-home community loses 4% of its tenants a year, while an apartment complex may see as many as half of its residents move in a year.

That means a reliable cash flow for trailer-park REITs. Investment pros are particularly high on Chicago financier Samuel Zell's Manufactured Home Communities, which owns 50 high-quality, mostly retiree communities in 17 states. PRA's Sotter expects Manufactured to increase its dividend 8% to 10% annually as cash flow gets a boost from acquisitions and rent increases.

Perhaps the biggest beneficiary of rent increases in an improving economy will be apartment REITs, particularly in the Southwest and Southeast. Construction stopped earlier in these markets than elsewhere in the country after the oil bust hit in the mid-1980s.

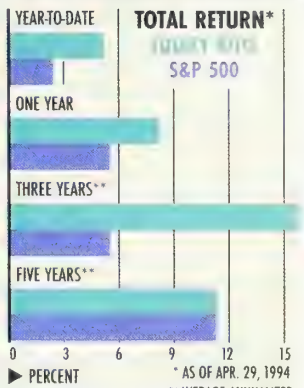
Now, as occupancy rates edge above 95%—thanks, in part, to spectacular population and job growth—rents are rising 6% to 10% a year, says Penobscot's Carr. He recommends Camden Property Trust, which owns developments in the South. He thinks Camden can increase cash flow and dividends by at least 15% a year.

SHOP CAREFULLY. Not everyone is optimistic about apartment REITs. "They're trading at a big premium to their underlying asset value," says Jon Fosheim, a principal at Green Street Advisors, which counsels institutional investors. "We think there's evidence that growth is slowing." Fosheim's REIT pick? DeBartolo Realty at less than $15 a share. He figures DeBartolo, the Youngstown (Ohio) spin-off of Edward J. DeBartolo Corp., one of the nation's largest regional mall owners and operators—has an underlying asset value of $18 a share. Although the country is pretty much saturated with conventional malls, they should benefit from the revival of department stores such as J.C. Penney and Sears Roebuck, says Fosheim.

The riskiest REIT sector is office buildings. Although the market has bottomed out, office buildings will see a slow recovery because there was so much overbuilding during the 1980s' real estate boom. If history is any guide, proceed carefully in REITs, especially in a sector that has been driven by excessive optimism.

Stephanie Anderson Forest

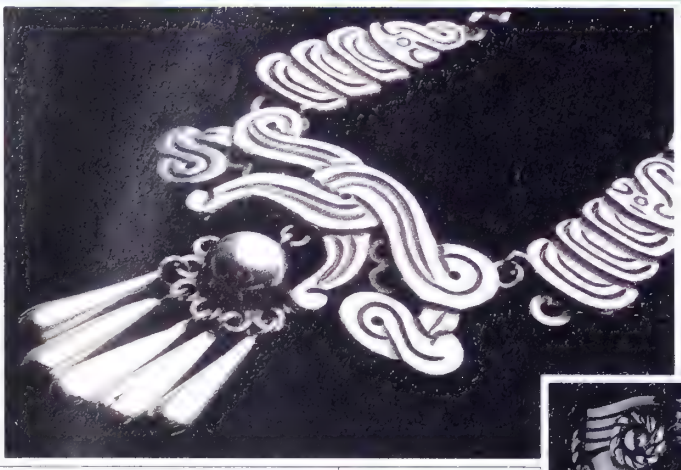
REITS VS. THE STOCK MARKET

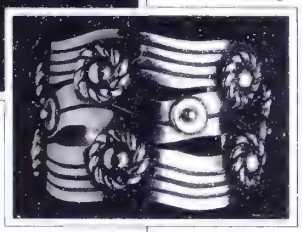


DATA: NATIONAL ASSOCIATION OF REAL ESTATE INVESTMENT TRUSTS

Collecting

A BOHEMIAN'S MEXICAN SILVER LEGACY





SPRATLING GEMS: NECKLACES RUN $1,000-$3,000; BRACELETS GO FOR $500-$1,500

William Spratling moved to Mexico in the late 1920s to write travel books and raise hell, just like his old roommate in New Orleans in 1926, William Faulkner. He did both—and even claimed to have invented the margarita. His real legacy, however, was the rebirth of silver-jewelry manufacture in Taxco, south of Mexico City. Spratling wasn't a silversmith, but, inspired by Art Deco and ancient Mexican works, he designed hundreds of sterling silver pieces, some with ebony, pearls, and semiprecious stones. The designs were executed by as many as 400 artisans at Taller Spratling, his Taxco studio. Buyers included the movie stars Bette Davis and Errol Flynn.

Now, Spratling jewelry is enjoying a revival. "It's timeless," says Allen Harrill, director of Nedra Matteucci's Fenn Galleries in Santa Fe, N. M. Thanks in part to her 1990 book, *Spratling Silver* ($32.50, Chronicle Books), the jewelry has doubled in value in the past three years, says author Sandraline Cederwall of Santa Fe/Arts of the Americas in San Francisco.

ONLY IN AMERICA. Signed pieces usually carry a stylized "WS" stamp along with "980" or "925" (for silver content) or "Taxco." Although you can still find them mixed in with generic Mexican jewelry at antique markets, most are sold in galleries or antique-jewelry stores, including the Treasured Scarab in Denver and Throckmorton Fine Art in New York. Expect to pay $1,000 to $3,000 for necklaces and $500 to $4,000 for brooches. Earrings sell for $300 to $1,000, and bracelets b[etween] $500 to $1,500. Oddly e[nough] you can't find much Spr[atling] silver in Mexico.

Almost any Spratling [piece] produced before 1967, w[hen] the daredevil designe[r was] killed in a car crash, i[s] able. Many collectors [seek] earlier works, with the[ir] edges and pre-Colu[mbian] designs that include s[tylized] animals and dramati[c geo]metric shapes.

If such [an] thentic [piece] are out [of] range, a Spratling [piece] makes je[welry] using old [Spratling] de[signs]. New iter[ms] marked "TS-24" and s[old] 25% to 75% of the ori[ginal]. Another alternative is [shopping] for works by Spratling [contem]poraries, some of [whom] apprenticed in his st[udio]. Bracelets signed "Mar[y] Taxco" and "Antonio" s[ell] $200 to $300. Quality ur[ban] Mexican jewelry fro[m] 1930s and '40s can cost [as] tle as $100. *Sandra A[ckerman]*

Smart Money

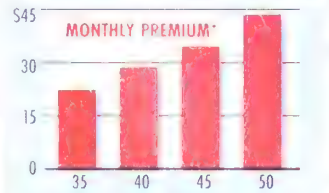
KEEPING YOUR RETIREMENT OFF THE DISABLED LIST

When people become disabled and can no longer work, their main concern is finding enough money to live comfortably. Often, they neglect to think about funding retirement, even though contributions to 401(k) and other pension plans stop while they're off the job.

A few disability insurers are looking to correct that deficiency. Within the past year, UNUM Life, Paul Revere Life, Chubb Life, and Provident Life & Accident have begun offering policies—separately, or as a rider to a regular disability plan—that give you a monthly or annual sum for retirement expenses. UNUM will even set aside money for a spouse until age 65 if the policyholder dies.

ADDS UP. Consider a 37-year-old with a $235,000 salary whose 401(k) contributions are $12,219 a year—70% out of pocket and 30% from the employer. If the exec must stop working for five years, say, because of an illness or accident, he or she would sacrifice $402,619 in cash buildup by retirement, assuming a 7.5% return, figures Philip Davis, president of Corporate Compensation Plans in Danbury, Conn. The worker would also forfeit $433,509 from a defined-benefit pension plan, bringing the total to $836,128. Even if the disability didn't last five years, the person could lose a significant cash buildup.

INSURING YOUR RETIREMENT SAVINGS



* FOR SOMEONE MAKING $150,000 A YEAR WHOSE ANNUAL 401(K) CONTRIBUTIONS, WITH EMPLOYER MATCHING, EQUAL $22,500. THE POLICY WOULD PAY $1,875 A MONTH, AFTER ONE YEAR AWAY FROM THE JOB, TO AGE 65.

DATA PAUL REVERE LIFE

But for premiums starting at $496 per year for a nonsmoker—less than 3% of regular disability coverage cost—a policy would pay $30,798 a year, tax-free, says Davis. Unfortunately, laws prevent consumers from placing the payout into their 401(k). That means they can't get an employer's matching contribution. But they can invest the money in a variable an[nuity] or other vehicle that tr[ades] offer the tax-deferred g[rowth] of a 401(k). In the [same] case, if the worker de[posits] the payout in an invest[ment] netting 7.5%, by retire[ment] he or she will have $94 [thousand]

HONOR SYSTEM. The [cov]age is offered through g[roup] at corporations and to[some] viduals, mainly those [who] make $100,000 or m[ore] year. A potential probl[em] that the cash goes t[o] worker and not directly [to] a retirement fund. So [if] person isn't diligent [about] saving, it might get frit[tered] away. Another draw[back] Holders of some policies [must] collect until they've [been] away from the job for a[t least]

Odds are you won't [live] to collect: Only 15% of [work]ers suffer a disability [at] least five years before [age] 65. So ask yourself: I[s] peace of mind worth [the] price? *Chris [Farrell]*

Health

EN KIDS JUST CAN'T ATTENTION

half-dozen fourth-graders sit around teacher Claire Borchardt at the ndent Woodlynde School e Philadelphia, riveted *ens for Breakfast*, a sci-fi opular with 10-year-olds. y, they describe ters, discuss nd analyze the line. Hands up. Once in a to remind them d analytically, rdt points to a that says: ead...and I .so I think...." in the blank ah verb makes g more than a e exercise. teacher would py with a class cited as Bors. But for her, ecially gratifyice several stuhave attention-/hyperactivity er (ADHD), an ereditary bioal condition an be a major m. For them, g focused or tting in a seat difficult. Talkt the wrong s often irresis-And some who uiet may just ly check out.

ON. As many n 20 students les with ADHD. find school so ing and dull ey fail. They rn off teachers tudents with netious, inapate behavior. impulsiveness them in trouhome, on the with the law. est high-profile r is Michael Fay, the teen caned for vandalism in Singapore.

But ADHD doesn't condemn kids to gloomy fates. Savvy educational and child-rearing methods, plus such medications as Ritalin, can make huge differences. Unless major learning disabilities pop up, most ADHD kids, properly handled, manage fine in regular classrooms. Some researchers say many of the approaches for ADHD kids serve all students.

Still, specific techniques are needed. Tedious lectures, for instance, guarantee disruption or inattention by ADHD kids. "They need to be involved as responders and thinkers, not as passive receptacles of information," says Sydney Zentall, a special-education professor at Purdue University. So at Woodlynde, kids don't just hear a lecture about China. They learn a little Chinese, make Chinese costumes for a play, visit Philadelphia's Chinatown.

ADHD kids fare best in small classes, with lots of personal attention. To avoid embarrassing them, teachers can use signals to keep control, such as finger snaps or color-coded cards (e.g., red for quiet). High-interest subjects, such as reading, should be alternated with less-intriguing work. But a routine is essential, since ADHD kids have a hard time with change. An educator's manual from Plantation (Fla.)-based advocacy group Children and Adults with Attention Deficit Disorders (ChADD) advises teachers to post schedules in the same place every day, with lots of advance notice on changes.

Life with an ADHD child doesn't have to be chaos. Parents complain of kids who play too loudly, get overly frustrated, break things, or put themselves in danger by, say, hanging out a window. These problems can be managed. More than anything, kids with ADHD need clear rules. Rewards for proper behavior—with plenty of praise—and penalties for misbehavior must come swiftly. Since these kids have trouble delaying gratification, some experts advise putting allowance money in a jar, then gradually adding for good behavior and taking away for bad, handing the child the total at week's end. Commands should be positive: tell the child to eat dinner, for instance, not to *not* watch TV when the family is at the table.

SUPPORT. Parents and teachers need to keep cool heads, ignore small problems, and understand the ailment. Utah psychologist Sam Goldstein distinguishes between incompetence and noncompliance. The child may not be able, or competent, to control dinnertime fidgeting. "But standing there defiantly, saying 'Make my day' is noncompliance and ought to be punished," he says.

Blame and criticism are out. Already, experts say, 80% of interactions between ADHD children and adults are negative. The result: poor self-esteem and a spiral of failure that may never let up. With a healthier approach, ADHD kids may turn their restlessness into an asset, growing up to be lively adults that others gravitate to. Parenting classes through groups such as ChADD (305 587-3700) can help everyone—especially the kids. *Joe Weber*

DENNIS THE MENACE

"BY THE TIME I THINK ABOUT WHAT I'M GONNA DO...I ALREADY **DID** IT!"

WHERE TO TURN FOR HELP

- *Attention Deficit Disorder and Learning Disabilities: Realities, Myths and Controversial Treatments*, by Barbara D. Ingersoll and Sam Goldstein ($12.95, Doubleday)
- CompuServe Information Services, ADD Forum—Subscribers enter GO ADD
- *It's Just Attention Disorder: A Video Guide for Kids*, $89.95, Sam and Michael Goldstein, Neurology, Learning & Behavior Center, 230 South 500 East, Suite 100, Salt Lake City, Utah 84102, 801 532-1484
- *Maybe You Know My Kid*, by Mary Fowler ($12.95, Birch Lane Press)
- *Putting on the Brakes: Young People's Guide to Understanding Attention Deficit Hyperactivity Disorder (ADHD)*, by Patricia O. Quinn and Judith M. Stern ($8.95, Magination Press)

DATA: BUSINESS WEEK

Worth Noting

■ **BROKER INDEX.** The American Stock Exchange is offering to include options trading in its new Securities Broker/Dealer Index, which tracks the brokerage industry. Among the nine component stocks: Bear Stearns, Charles Schwab, Morgan Stanley, and Salomon Inc.

■ **IN ALIGNMENT.** Free booklets from office-furniture maker Haworth help businesses comply with the Americans with Disabilities Act and educate employees about ergonomics. They come with a related computer disk. Call 800 344-2600.

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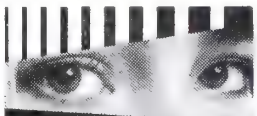

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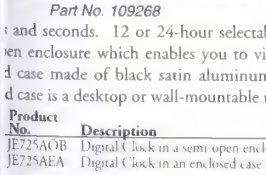

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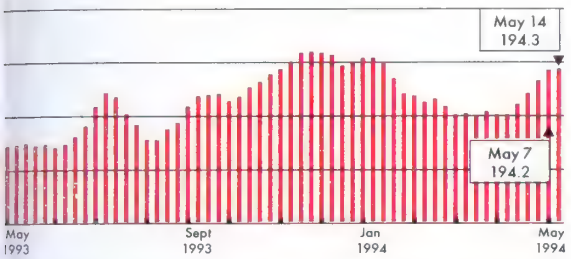
usiness Week Index

DUCTION

e from last week: 0.1%
e from last year: 3.7%

1967=100 (four-week moving average)

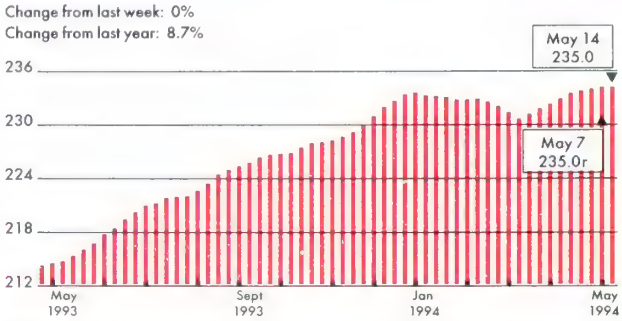


roduction index was virtually unchanged during the week ended May 14. easonally adjusted basis, higher output levels of steel, electric power, coal, oard, paper, and lumber offset production declines in the auto and crude-oil- industries. Truck production and rail-freight traffic were unchanged from the s week. Before calculation of the four-week moving average, the index edged 94.2 from 194.

BW production index copyright 1994 by McGraw-Hill Inc

LEADING

Change from last week: 0%
Change from last year: 8.7%



The leading index showed little change during the week ended May 14 as the bearish tone of the financial markets took its toll on the economy's outlook. Falling stock prices and higher bond yields offset the positive thrust from faster growth rates in materials prices, real estate loans, and M2. Data for business failures remain unavailable. Before calculation of the four-week moving average, the index rose to 236.3 from 235.

Leading index copyright 1994 by Center for International Business Cycle Research

DUCTION INDICATORS

	Latest week	Week ago	% Change year ago
/21) thous. of net tons	1,903	1,918#	0.6
5/21) units	149,123	148,241r#	4.5
(5/21) units	119,811	120,576r#	14.8
C POWER (5/21) millions of kilowatt-hours	54,695	54,737#	2.8
OIL REFINING (5/21) thous. of bbl./day	13,986	14,279#	1.8
/14) thous. of net tons	19,931#	19,805	9.9
OARD (5/14) thous. of tons	860.4#	847.4r	5.3
5/14) thous. of tons	791.0#	801.0r	5.9
(5/14) millions of ft.	458.7#	434.4	−2.4
EIGHT (5/14) billions of ton-miles	22.7#	22.7	6.1

: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association an Railroads

EIGN EXCHANGE

	Latest week	Week ago	Year ago
E YEN (5/25)	105	104	107
I MARK (5/25)	1.65	1.66	1.60
POUND (5/25)	1.51	1.51	1.56
FRANC (5/25)	5.64	5.68	5.46
AN DOLLAR (5/25)	1.38	1.38	1.27
RANC (5/25)	1.40	1.41	1.43
N PESO (5/25)[3]	3.295	3.325	3.120

Major New York banks. Currencies expressed in units per U.S. dollar, except for British pressed in dollars

TES

	Latest week	Week ago	% Change year ago
/25) $/troy oz.	387.300	379.600	3.4
RAP (5/24) #1 heavy, $/ton	126.00	126.00	18.3
FFS (5/24) index, 1967=100	217.1	218.8	5.5
(5/21) ¢/lb.	107.8	102.6	22.9
JM (5/21) ¢/lb.	64.5	63.0	24.0
5/21) #2 hard, $/bu.	3.63	3.67	1.7
(5/21) strict low middling 1-1/16 in., ¢/lb.	78.49	77.60	34.4

London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* nsas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (5/20) S&P 500	451.79	463.54	1.5
CORPORATE BOND YIELD, Aaa (5/20)	7.89%	8.12%	5.5
INDUSTRIAL MATERIALS PRICES (5/20)	100.9	100.6	5.8
BUSINESS FAILURES (5/13)	NA	NA	NA
REAL ESTATE LOANS (5/11) billions	$425.7	$424.0r	0.9
MONEY SUPPLY, M2 (5/9) billions	$3,552.7	$3,546.1r	2.4
INITIAL CLAIMS, UNEMPLOYMENT (5/7) thous	381	352	13.1

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
ORDERS FOR DURABLE GOODS: MFG. (Apr.) billions	$147.0	$147.0r	13.3
EXISTING HOME SALES (Apr.) millions	4.12	4.07r	19.1
BUDGET SURPLUS OR DEFICIT (-) (Apr.) millions	$17,454	−$32,315	115.7
REAL GROSS WEEKLY PAY (Apr.)	$257.05	$256.70	1.3

Sources: Commerce Dept., National Assn. of Realtors, Treasury Dept., BLS

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (5/9)	$1,141.9	$1,138.3r	7.2
BANKS' BUSINESS LOANS (5/11)	292.1	293.7r	5.1
FREE RESERVES (5/11)	623	1,343r	−9.3
NONFINANCIAL COMMERCIAL PAPER (5/11)	155.1	158.4	−2.3

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (5/24)	4.19%	4.27%	3.07%
PRIME (5/25)	7.25	7.25	6.00
COMMERCIAL PAPER 3-MONTH (5/24)	4.55	4.68	3.19
CERTIFICATES OF DEPOSIT 3-MONTH (5/25)	4.49	4.50	3.16
EURODOLLAR 3-MONTH (5/20)	4.53	4.71	3.13

Sources: Federal Reserve, First Boston

a in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment. n Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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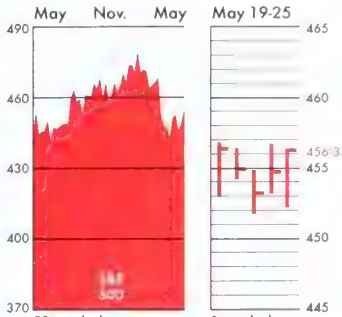
vestment Figures of the Week

NTARY

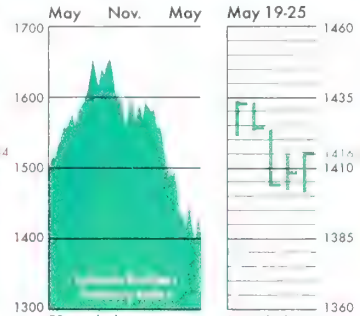
market continues its
l ways. The euphoria over
inflation-fighting rate
quickly, and bond prices
s made huge day-to-day
The equity crowd was
eat. From the Dow indus-
rn to the Russell 2000,
de gains of about 0.6%
ek. One star was IBM,
s up nearly 5% for the
reached its highest
3 months. Overseas,
stocks rallied on pros-
a resumption of trade
the U.S.

STOCKS



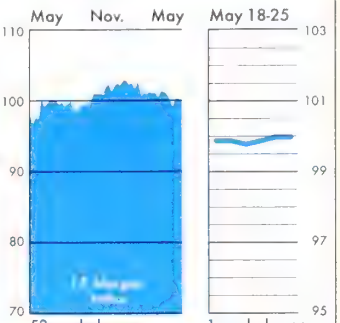
52-week change +0.6%
1-week change +0.6%

BONDS



52-week change −6.4%
1-week change −0.9%

THE DOLLAR



52-week change +2.2%
1-week change +0.1%

KET ANALYSIS

CKS	Latest	% change Week	52-week
ES INDUSTRIALS	3755.3	0.6	6.1
OMPANIES (S&P MidCap Index)	170.5	0.6	1.6
MPANIES (Russell 2000)	248.2	0.6	6.9
ANIES (Russell 3000)	262.7	0.7	1.2

I STOCKS	Latest	% change (local currency) Week	52-week
FINANCIAL TIMES 100)	3020.7	−3.1	6.1
IKKEI INDEX)	20,663.6	2.5	−1.1
(TSE COMPOSITE)	4291.4	0.3	11.0

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.26%	4.28%	3.10%
30-YEAR TREASURY BOND YIELD	7.36%	7.28%	6.92%
S&P 500 DIVIDEND YIELD	2.79%	2.87%	2.78%
S&P 500 PRICE/EARNINGS RATIO	20.1	20.0	22.9

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	462.2	462.5	Negative
Stocks above 26-week moving average	30.9%	27.6%	Neutral
Speculative sentiment: Put/call ratio	0.35	0.51	Neutral
Insider sentiment: Vickers sell/buy ratio	1.48	1.53	Positive

STRY GROUPS

BRIDGE INFORMATION SYSTEMS INC

EEK LEADERS	% change 4-week	52-week	Strongest stock in group	% change 4-week	52-week	Price
	11.7	28.5	CYPRUS AMAX MINERALS	15.6	11.4	30½
GRAPHY IMAGING	10.9	9.1	EASTMAN KODAK	12.9	11.7	47
E TIME	10.7	35.5	BRUNSWICK	16.0	75.0	24½
MINING	8.7	5.4	PLACER DOME	13.0	27.3	22¾
CONTAINERS	8.3	22.1	STONE CONTAINER	15.1	82.1	15¼
EEK LAGGARDS	% change 4-week	52-week	Weakest stock in group	% change 4-week	52-week	Price
C POWER	−8.5	−18.4	HOUSTON INDUSTRIES	−14.6	−29.1	31⅜
L MANUFACTURING	−7.7	−19.6	LIZ CLAIBORNE	15.5	−37.4	21¾
UILDING	−6.6	−12.1	PULTE	−13.1	−23.6	23⅛
TY CHEMICALS	−6.6	−9.9	GREAT LAKES CHEMICAL	−14.7	−24.1	55⅛
L MANAGEMENT	−5.4	62.8	COLUMBIA HEALTHCARE	−6.6	56.5	39⅛

JAL FUNDS

MORNINGSTAR INC

otal return	%
ON STRATEGIC SILVER	13.1
GOLD EQUITIES INDEX	12.7
LATIN AMERICA	12.1

tal return	%
R LATIN AMERICA	57.5
. LYNCH LATIN AMERICA A	49.5
R INTERNATIONAL GROWTH A	49.1

LAGGARDS

Four-week total return	%
CAPPIELLO-RUSHMORE UTILITY INCOME	−7.1
STRATTON MONTHY DIVIDEND	−7.0
DREYFUS EDISON ELECTRIC INDEX	−6.8

52-week total return	%
MONITREND GOLD	−32.3
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−23.0
PILGRIM CORPORATE UTILITIES	−21.1

TIVE PORTFOLIOS

DRI/McGRAW-HILL

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Foreign stocks	U.S. stocks	Gold	Treasury bonds	Money market fund
$12,154	$10,416	$10,360	$10,221	$10,202
+0.45%	+1.21%	+1.42%	−1.59%	+0.04%

is page are as of market close Wednesday, May 25, 1994, unless otherwise indicated. ps include S&P 500 companies only; performance and share prices are as of market close May 24. Mutual fund returns are as of May 20. Relative portfolios are valued as of May 24. A more detailed explanation of this page is available on request.

THE MOST-FAVORED CHINA POLICY

Throughout its history, U. S. foreign policy has ricocheted between idealism and pragmatism. The idealists urge the spread of democratic values throughout the world. The pragmatists focus on national interest, particularly security.

There are good historical reasons for this duality between idealism and pragmatism. The American Revolution against a despotic English king and the immigration of millions seeking sanctuary from authoritarianism brought about America's Jeffersonian democracy. But American policy has also been shaped by more pragmatic concerns—the conquest of the Western frontier, the battle against Soviet expansionism, the struggle for open markets, and the need to secure supplies of raw materials.

In the modern era, Woodrow Wilson's call to make the world "safe for democracy" in World War I represented the epitome of the idealist sensibility. Richard Nixon's opening of relations with China was in the best tradition of realpolitik.

Today, China is once again center stage, an international arena in which idealism and pragmatism battle it out to define U. S. foreign policy. There is no stronger image tugging at the American heart than the sight of a lone individual standing fast in front of a line of tanks, as Cable News Network broadcast from Tiananmen Square nearly five years ago.

But the Clinton Administration's effort to promote human rights in China by threatening to revoke its most-favored-nation trading status has been an unmitigated disaster. Not only has it failed to intimidate Beijing, it has threatened to undermine the once-powerful force working for democracy in China today: economic growth. The expansion of the market economy and double-digit growth rates are doing more to create a freer society inside China than any external pressure the U. S. could apply (page 94).

A detailed look at Chinese life shows that prosperity is generating a greater measure of economic, social, and political freedom for millions of Chinese. It also highlights how the U. S. can support that freedom with a supply-side kind of human-rights policy that actively helps the internal forces pushing for rights.

The entire fabric of Chinese state and party control is starting to unravel. New private-sector jobs and a massive wave of mobility are breaking down the *dang an* system of personal dossiers kept by party officials that virtually enslaved many Chinese in the past. Workers' family backgrounds, class, and political leanings were listed and used to control income, promotions, and careers. Going, too, because of job mobility, is the control of local neighborhood "watch" groups that kept tabs on marriages, children, even abortions.

As the economy becomes increasingly decentralized, it undermines the power of the Propaganda Ministry to control what people see and hear, while the explosion of information via satellite dishes, computers, faxes, and phones is tying millions of Chinese into the global culture.

Chinese workers themselves are increasingly striking for better pay and working conditions. About 800 illegal trade unions exist in Guangdong Province alone. Even underg churches are springing up all over China, as the vo from the end of communist ideology is filled by religi

Given this reality, what should be U. S. foreign pol ward China? The most important step by the Clinto ministration would be to fully delink MFN and human r Promoting trade and U. S. investment in China generat very kind of income and mobility essential to human r

Yet there is more to do. The U. S. should encoura spread of commercial law through a special pr that sends American lawyers to China and trains Ch lawyers on U. S. campuses. In a society where rule has long been subordinated to *guanxi*, or personal c tions, the Chinese are increasingly turning to their leg tem to adjudicate business and personal disputes.

There are lawsuits everywhere, some of them even a the national police. While the suits focus on economic r there is a spillover into individual rights under the law Ford Foundation is sponsoring public-interest legal ce Many more are needed.

Pumping more information into the society is also cri Increasing Voice of America and Radio Free Asia broad to provide outside perspectives on internal events is i tant, whether the programs get jammed or not. So, t encouraging private investment in local media companie transforming them into full-fledged, advertiser-supp newspapers, magazines, and TV stations.

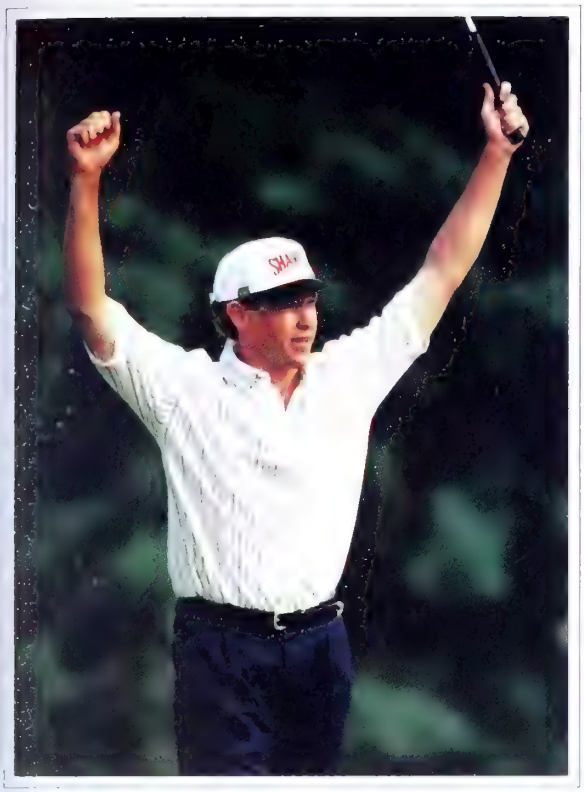
The U. S. labor movement can help by providing gui to the growing number of underground unions in Chin ter World War II, American labor unions played a ke in establishing anticommunist, pro-democratic unions in ern Europe and Japan. They did it again in Poland i 1980s. China is their next overseas challenge.

American companies can help most through their jo erating investments. Beyond that, however, they can promote freedom by agreeing to a voluntary code of co that prohibits them from using or selling products ma Gulag labor and importing goods made in prisons. A ber of U. S. companies such as Reebok International L already use these kinds of guidelines.

Delinking not only promotes human rights in China, vances other pragmatic U. S. interests. Washington cou Beijing's active help on North Korea and in curbing nu proliferation. The growing trade deficit with China mu soon addressed. And there are copyright and counterfe problems that must be solved.

There are ways the U. S. can pressure China witho ing MFN. Most important, Washington has not been d playing its "Taiwan card," and it is time it learned.

The memory of Tiananmen Square makes an unem al U. S. policy toward China difficult. But the facts about h is going on at the grassroots levels offer strong evidence economic growth promotes freedom. That is why the can renew MFN with a clear conscience.



Lee Janzen, winner of the 1993 U.S. Open

The U.S. Open and Rolex: two of the game's most venerable names.

No championship in golf is more difficult to capture or more prized than the U.S. Open. Beyond the competition of some 156 of the game's best players, the Open champion must contend with a course on which greenkeepers have been instructed to narrow the fairways, nurture the rough, and bring the greens to championship speed.

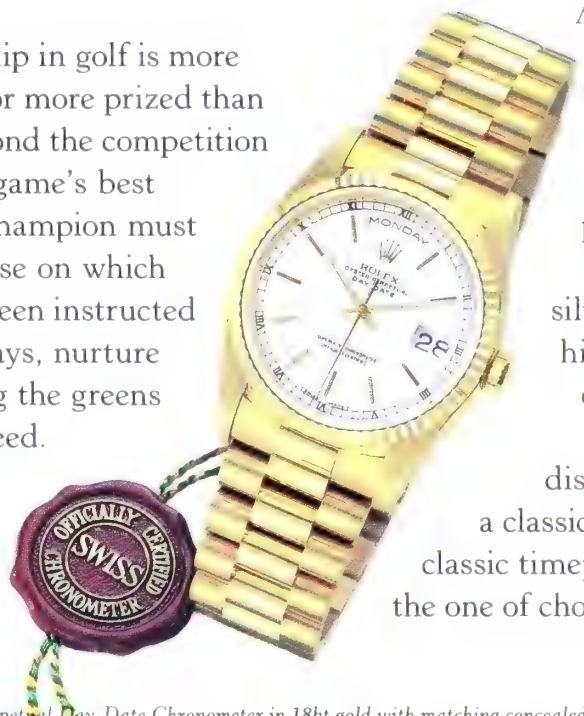
The stature of today's event could hardly have been foreseen by the golfers at the first Open. There were just eleven that October day in 1895, and only 200 spectators to cheer them through 36 holes at the Newport Golf Club. Britain's Horace Rawlins bested nine fellow pros and one amateur to win a medal and a modest cash prize. But Americans had to wait sixteen years for one of their own to take the title. John J. McDermott did it in 1911.

Oakmont Country Club, site of the 1994 U.S. Open

1911 John J. McDermott, first American to win

And this year, more than 6,000 golfers will vie for a spot in this prestigious field. But, ultimately, only one player will have his name added to the U.S. Open's silver trophy, thus ensuring his place in the rich history of American golf.

At an event that is so distinguished it has become a classic, it isn't surprising that a classic timepiece is so often the one of choice. Rolex.



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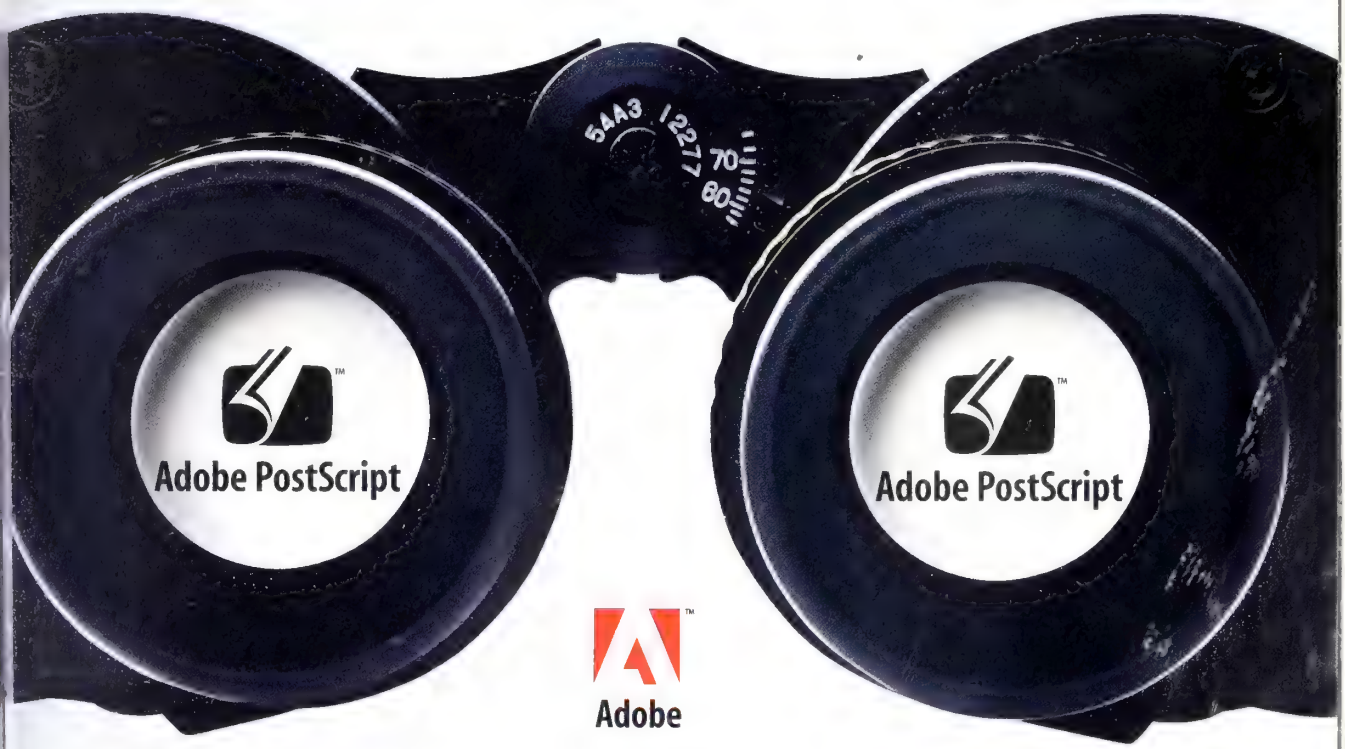

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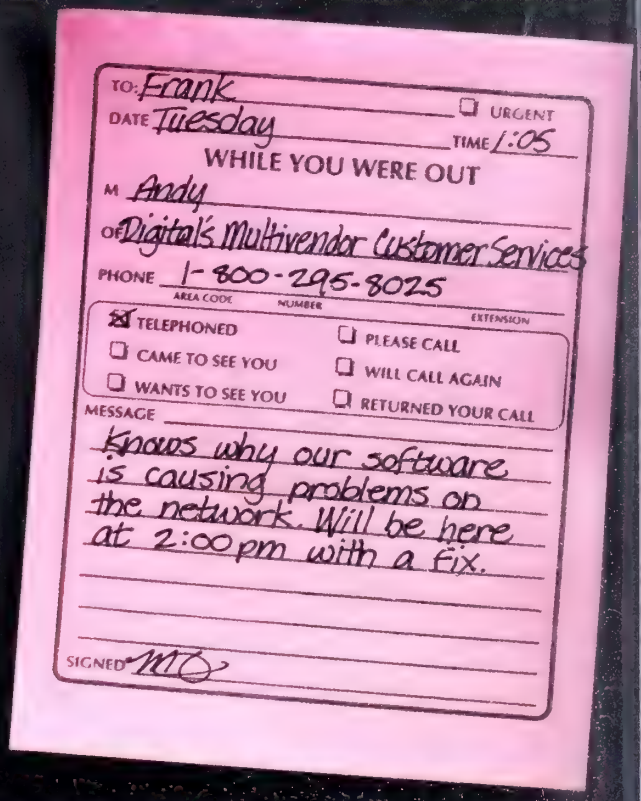

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A NEW COLUMN WITH THE LOWDOWN ON HIGH TECH

Necessity can be the mother of expertise as well as invention. In this case, the expert is Steve Wildstrom, the BUSINESS WEEK editor who has taken up the task of keeping us posted on technology developments in our new Technology & You column. The column will provide insight on how technology affects our daily lives, whether in the office or the home (an increasingly blurred distinction in the day of laptops and cellular phones).

The focus, as reflected in the title of the column, will be on delving into and explaining technology as it affects you as a user. The subjects will run the gamut—from rating the latest line of laptops to sharing tips on corporate-information management, to analyzing government technology policy.

WILDSTROM WILL DELIVER "TECHNOLOGY & YOU"

Steve is eminently qualified to write about technology with a personal, nontechnical approach. He came to the digital world with little more than a lively curiosity while majoring in sociology back in the late 1960s at the University of Michigan and analyzing polling data on an IBM 360. Steve became a true computer jock in 1984, when he was designated the office wizard in charge of keeping the computer systems running in the magazine's Washington bureau.

His home is becoming something of a mini-network, too. Steve, his wife, Susan, and his sons, Jonathan and David, use their Dell 486D33, a 386DX, and a new Power Mac 6100/60 for such things as preparing math tests or playing games.

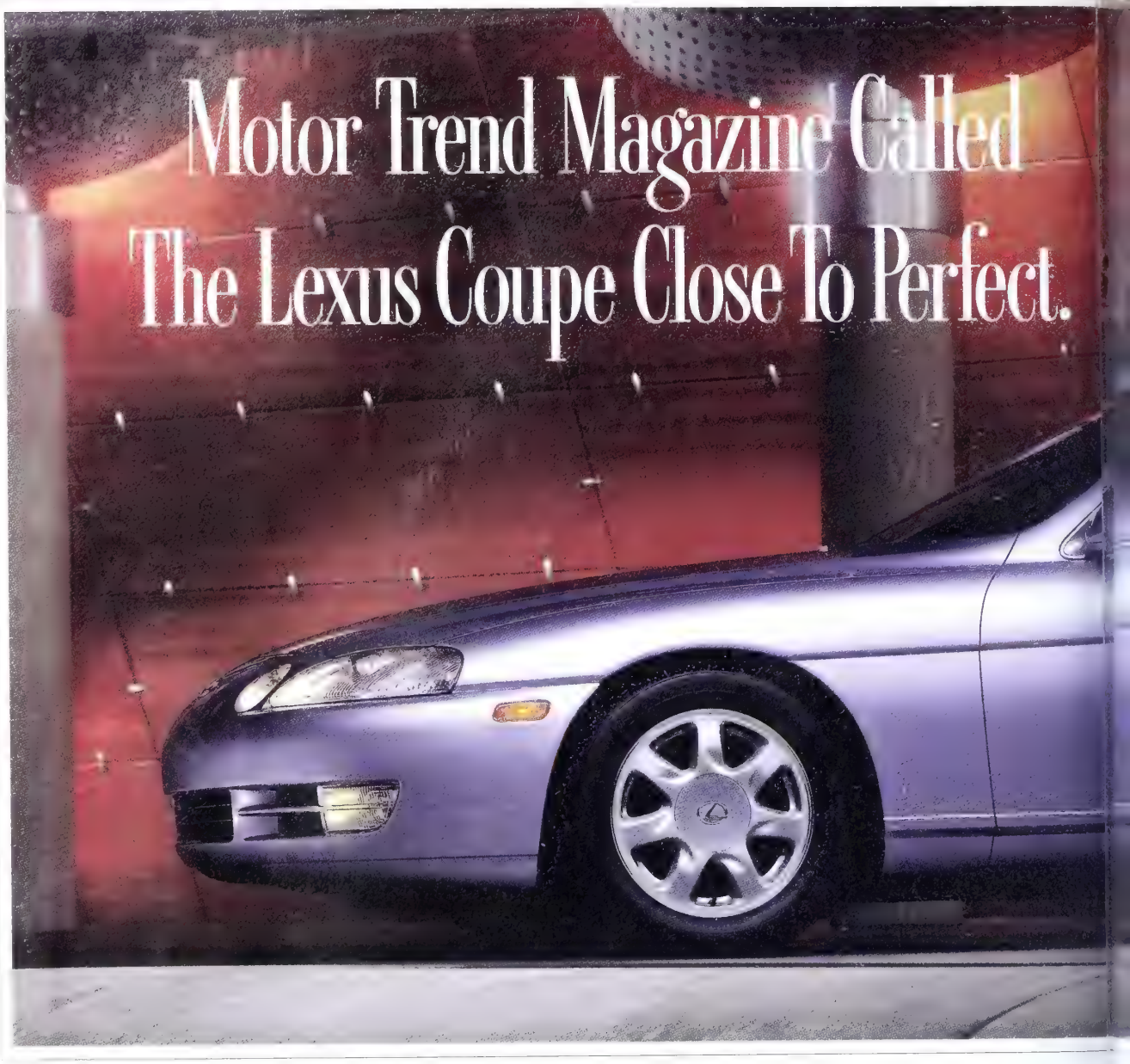
This familiarity with computers has paid handsome dividends for the magazine. Steve was part of the team that produced "The Technology Payoff," our June 14, 1993, cover, which proved to be a prescient analysis of the productivity gains now accruing from years of investment in computers and related equipment. More recently, he wrote some and edited all of the extensive personal-technology guide in our bonus issue, The Information Revolution.

Steve, 46, joined BUSINESS WEEK in Detroit in 1972 after three years with the Associated Press. He has been in Washington since 1974, covering economic policy and, until starting the new column, serving as senior news editor.

While Steve brings his own expertise to the column, we want to encourage readers to make the new addition an interactive feature, consistent with the nature of how we share information these days, whether via e-mail or electronic bulletin boards. The "Bulletin Board" feature was designed with reader input in mind. With the world of information technology moving so fast, we are all learning as we go. I encourage you, the reader, to share your curiosity and experience. The column, on page 20, includes Steve's Internet and fax addresses. Write early and often—and enjoy.

Stephen B. Shepard

Editor-in-chief



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1994 Lexus, A Division Of Toyota Motor Sales, U.S.A., Inc. Lexus reminds you to wear seat belts and obey a

Close? Close?!

Of course, to the engineers at Lexus, that sounded like a challenge. So they went back with the formidable task aking the 1995 Coupe even more awe-inspiring than its predecessor. Re-examining everything from styling to ormance for a way to improve a car many felt didn't need improvement. Over 20 refinements later, we are pleased troduce the new 1995 Lexus Coupe.

Last year, *Car and Driver* magazine said, "It is difficult to imagine making the SC 400 better." We wonder they'll say this year. For the dealer nearest you, call 800-USA-LEXUS.

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st you, call 800-872-5398. Motor Trend, February '93 issue. Car and Driver, November '92 issue.

NUMBER 3376

BusinessWeek

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STATION BREAK: IN HINDSIGHT, THE DEFECTION OF AFFILIATES FROM LAURENCE TISCH'S CBS TO RUPERT MURDOCH'S FOX SEEMED INEVITABLE

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In the blink of an eye, CBS Lost eight affiliate stations to Fox. The network downplays the defection, but the raid has clearly put it on the defensive. The irony is that for eight years, CBS Chairman Laurence Tisch has concentrated on broadcast and broadcast alone—and that narrow focus may make a bad situation worse

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Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

THE NAME GAME

AT LEAST IT WON'T BE HUIZENGA STADIUM

WAYNE'S WORLD: *Hailing Keith Jackson*

What's in a name? Plenty, as Wayne Huizenga, chief of Blockbuster Entertainment, is finding out. The video-rental and sports czar wants to buy the Miami Dolphins for $138 million and the 50% of Joe Robbie Stadium that he doesn't own for $12 million. Trouble is, the sellers—heirs of founder Joe Robbie—insist that the stadium name not change. This is stymying the deal.

Huizenga doesn't want to enter an open-ended long-term agreement on the name. "I'm not going to call it Huizenga Stadium, absolutely not," vows Huizenga, who also owns the Florida Marlins baseball team and Florida Panthers hockey team. And he argues that if he ever wants to sell the field, a permanent name would hurt. Corporate sponsors pay big to see their monikers on sports facilities: United Airlines anted up $20 million for Chicago's new United Center.

Some of Robbie's descendants are insistent. Says Deborah Olson: "My father built the stadium. I consider it a memorial." A compromise is under negotiation. Meanwhile, Huizenga is taking a drubbing locally. *Miami Herald* columnist Greg Cote wrote that removing the Robbie name "would be corporate grave-robbing." *Gail DeGeorge*

STREET TALK

THAT BEAR COMES GROWLING HOME

N.Y. EXCHANGE: *A long, cold summer*

Pampered Wall Street types, used to bull-market riches, are starting to feel the pinch of this year's declining market. Securities firms' pretax net profit for 1994's first quarter is less than half the $3.6 billion logged in the same 1993 period, estimates the Securities Industry Assn. That is producing a round of cost cuts.

Charles Schwab, which hired at a torrid pace last year, has asked employees to take "sabbaticals" for up to six months at 25% pay. PaineWebber is requiring that all new hires be approved by headquarters. Merrill Lynch is "selectively reducing hiring" in all but essential areas. Merrill is also clamping down on travel, entertainment, and other expenses. Fidelity is "reassigning" 380 telephone operators to other jobs, expecting a slow summer.

On the plus side: This year's cuts are tame compared to past market downturns, largely because most Wall Street firms are still lean from 1987 and 1990 austerity. *Geoffrey Smith*

TALK SHOW

A lot of them will think that they've died and gone t heaven.

—Rupert Murdoch, on the 12 Fox affiliates he dumped in a recer station swap, where some may go to CBS

ANNUAL CONFESSIONS

SAY IT AIN'T SO, BEN & JERRY

Ben & Jerry's Homem that socially conscious cream purveyor, has a co sion: Not all its much-ba hooed "all-natural" ingredi have been natural. We're t ing sulfur dioxide preserva in its Cherry Garcia fla And other flavors with ar cial vanilla, margarine, or hydrogenated vegetable oi

This was the scoop in Waterbury (Vt.) outfit's jus sued annual report. The

ports have become quirkyb rums for mea culpas in a section done by an outsi consultant. This one revels that the company may h knowingly used "dried-o dough in some batches of s best-selling flavor, Chocol Chip Cookie Dough. Plus it says, staffers widely critic a "lack of leadership."

The company, started by two hippie entrepreneurs, sts it had thought the all-natul claim was correct. Then, nw FDA rules forced it to ask sp pliers of mixed-in ingredient the chunky stuff—what thy used. Since learning the sho ing truth, the company says it has taken out the sulfur di ide and the artificial vani and is testing to see if co sumers will like butter inste of margarine and the like. A spokesman says Ben & Jerr's has removed the all-natul claim from flavors that do measure up. *Mark Maremo*

REALITY CHECK

FOX SAYS it is not a television network. Rupert Murdoch's upstart "programming service," as it calls itself, is taking advantage of Federal Communications Commission rules that say a network must offer more than 15 hours of prime-time viewing per week. Fox has cleverly programmed exactly 15, while the Big Three each have 22. As a non-network, Fox is free to syndicate the shows that it produces—a lucrative business denied by law to ABC, CBS, and NBC until November, 1995.

A NETWORK? *You bet*

IN REALITY, Fox is a network in most respects. It has a broad reach: Its signal is available to 95% of American homes, vs. 99% for the Big Three. Although its ratings average 7.2 points (with each point almost 1 million households), compared with 12.4 for the others, the difference is mainly because Fox shows are on for less time each evening. And this fall, Fox will begin airing NFC football, which it won from CBS. With an operating income of $261 million, Fox has almost overtaken NBC's No. 3 spot for financial performance. The FCC is being fairer by phasing out the syndication ban for the Big Three. But while it lasts, the ban gives Fox a big leg up.

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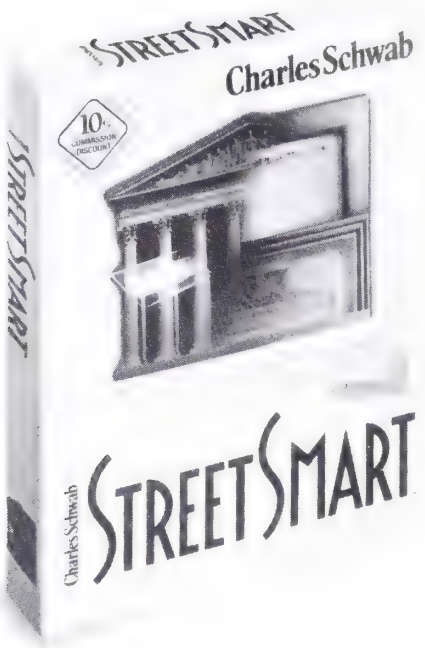

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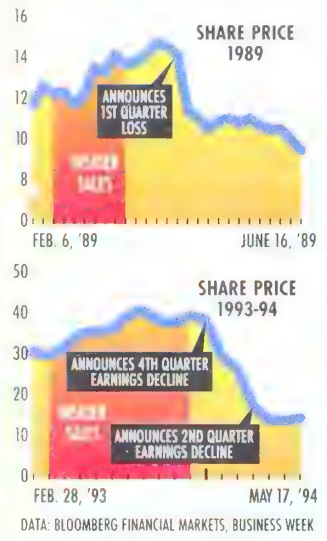
Up Front

INSIDE MOVES

BAD-NEWS BEARERS WHO LUCKED OUT TWICE

Information Resources, the market-data company, has an information problem—the insider kind. Company officials sold IRI stock before IRI announced bum earnings, slamming the share price. Worse, critics say, this happened twice—in 1989 and 1993. A trial nears an end in a shareholder suit stemming from '89; a suit for '93 was recently filed.



The company argues in both cases that officials had no idea of impending bad news and sold to diversify their holdings—and that IRI, in a seesaw battle with rival A. C. Nielsen, is a volatile stock. The officials, also defendants in the suits, won't comment, says IRI.

Then-Chairman John Malec told institutional investors on Feb. 14, 1989, that earnings per share for the year would be 50¢ to 55¢, the 1989 suit says. Around then, he sold IRI shares worth $2.2 million; along with two other insiders' sales, that's a total of $3.5 million. (IRI says the Malec story isn't in context: Malec volunteered no figures but, in reply to a question, said he was "comfortable" with 50¢ to 55¢.) In April, 1989, IRI announced a quarterly loss due to several troubled operations. The stock sank $2 per share, to 11.

In 1993, from May through December, the new suit says, 16 officers or directors sold shares for $14.8 million—with Chairman Gian Fulgoni accounting for $835,000. All that time, the suit says, IRI gave rosy assessments to analysts. But on Feb. 4 and Apr. 5, 1994, IRI said tough competition had lopped earnings to half of analysts' forecasts for the two preceding quarters. The stock, now at 15, has lost almost two-thirds of its value since early February. □

WHITE-COLLAR BLUES

RESOLING FOR THE FORMERLY WELL-HEELED

ALLEN-EDMONDS: A run on repair work

The sad armies of executives axed in corporate downsizings are out pounding the pavements. Trouble is, they're looking a mite down at the heels—and new shoes for the big job interview are prohibitively expensive. That's why Allen-Edmonds, the Milwaukee-based men's shoemaker whose styles fetch as much as $1,500 per pair, is having a huge run on its refurbishing sideline, says its president, John Stollenwerk.

For $80, a customer can send in his Allen-Edmonds and get them redone—restitched, resoled, etc. When this program started five years ago, only 100 pairs a month showed up. Now, the number's pushing 700. □

DRAWN AND QUARTERED

PROXY MOXIE

AN UNUSUAL WAY TO CAPTURE A COMPANY

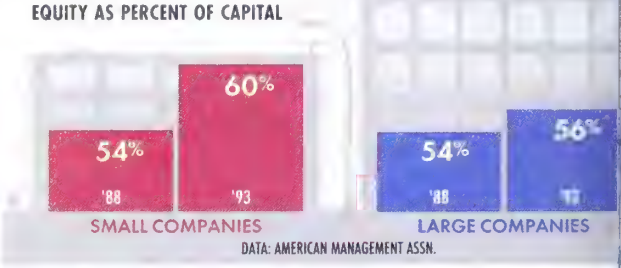
As proxy fights go, taking away the annual-meeting gavel is an unusual approach. Consider insurer US Facilities, wooed by $397 million Fidelity National Financial, the title insurance company, for $15 per share. The suitor wanted to place resolutions on Facilities' May 25 annual-meeting ballot to put Facilities on the block and run two Fidelity-backed board candidates. But $160 million Facilities said that according to its bylaws, Fidelity was too late.

So Fidelity cooked up a proxy fight. It began soliciting proxies from Facilities shareholders, then threatened not to vote them and to prevent the target company from reaching a meeting quorum. Fidelity's lawyer, Mi... Goroff, says pressure was needed to get Facilities' "board to take our proposal seriously." Apparently, the strategy worked. The board voted on May 16 to let Fidelity on the ballot but says it wasn't bowing to pressure. At the meeting, shareholders approved the Fidelity resolutions, though Facilities has vowed to challenge the two board members' election. *Linda Himelstein*

THE BIG PICTURE

GETTING SOLID

Most companies in the last five years have pushed to lower debt and increase equity. But one survey found small companies (grossing less than $10 million a year) were more successful than large companies.



FOOTNOTES

Change since 1984 in household breakfast consumption of fried eggs: down **54%**. Of bagels: up **169%**

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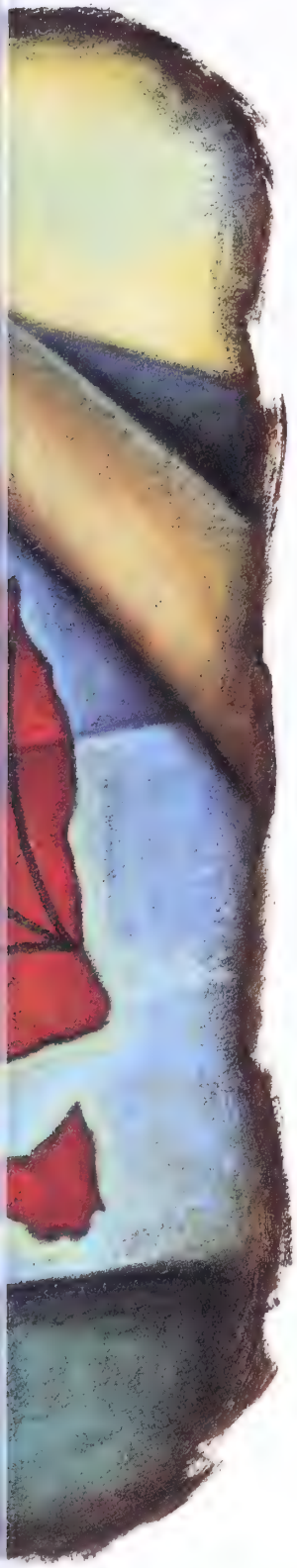

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NEWT GINGRICH BEGS TO DIFFER

Your feature "Reality check" (Up Front, May 9) missed several facts about reality in the proposed World Trade Organization.

Fact: The new organization would be one nation one vote, with no veto. Antigua and Macao would equal the U. S.

Fact: Payments would be assessed based on share of world trade. For less than 1% of the vote, the U. S. would pay more than 20% of the budget.

Fact: Vice-President Al Gore at the GATT final session described a World Trade Organization Committee on trade and environment with "broad terms of reference. It has a comprehensive work program. It has a mandate to develop recommendations for necessary change." He also outlined the opportunity for world labor standards to be discussed in the World Trade Organization.

Creating a permanent World Trade Organization and launching new projects on the environment, labor, and in the future on other issues deserves critical scrutiny. It would be sensible to question before we ratify and not rush into a decision we have not explored thoroughly.

Newt Gingrich (R-Ga.)
U. S. House of Representatives
Washington

BECKER'S WORLD VIEW GETS RAVES—AND RASPBERRIES

In regard to Gary Becker's article, "Let's defuse the population bomb—with free markets" (Economic Viewpoint, May 23), I agree with him 100%. The U. N. and other international organizations' policies on Third World nations' development were drafted based on naive assumptions and outdated information. If they really care about helping to solve some of the serious problems facing these nations, they must concentrate more on how to improve the educational systems and how to support businesses of the microentrepreneurs in these developing nations.

Michael Armah
Alexandria, Va.

When will we disabuse econon
of the absurdity that per ca
income data are reflective of impr
ments in family income? Becker st
"The typical Third World family is
much better off than 40 years ago."
evidence: "Per capita incomes in mo
these nations have grown at
rates...." Unfortunately, per ca
rates simply do not stand the te
disaggregation.

Witness the U. S.: From 1973 to
real per capita disposable income
creased at an annual rate of 1.3%.
ing the same period, the top fifth o
population increased its share of fa
income by 7.8%, while the lower fi
share decreased by 16.4%. Four-fift
American families experienced fallin
stagnant real incomes during the pe
"Much better off"? Hardly.

Stephen Vieder
Presi
Jessie Smith Noyes Founda
New

A CHARACTER REFERENCE FOR DAVID WATKINS

Your article "The Arkansas c
strikes again" (Top of the N
May 16) seems an effort to manu
ture sensationalism without get
the complete facts regarding W. D
Watkins.

My association with Watkins
back to 1982, when I first knew hi
the long-distance telephone busin
providing service to families and
nesses in Arkansas and Mississip
found that he was not only very ca
but a hard-working, innovative e
preneur who provided leadership o
highest quality. After we sold our
nesses, Watkins and I looked at nu
ous other businesses together, a
found his proposals accurate and
thought out. At no time did Watkin
ceive commissions or fees that were
appropriate. In fact, the commiss
and fees he received did not cover
direct costs that were involved in tr
to work with these businesses that
seeking financial help.

In 1989, I began to explore the

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Readers Repor

sibility of working with Outback St house Inc., and I invited Watkin work with me in developing a busi plan. Watkins did an outstanding and provided not only Outback but self with all the information and all services at reasonable costs that could have asked for.

I suggest that in the future, you your staff get all of the facts prio writing such a disparaging article.

Steve Grant
Presi
J&R Restaurant Gr
Jackson, M

Editor's note: Outback Steakhouse is owned by J&R. This letter, one of se we received attesting to Watkins' c acter and background, was written i sponse to a request from Watkins, has since resigned his White House s staff job.

THE TROUBLE WITH UNIONS

Your article "Why America needs ions, but not the kind it has n (The Workplace, May. 23) was well searched and well presented.

At the present time, the more ser problems are the government-empl unions, municipal-employee unions, the National Education Assn. My ob vation of this group is that they much more interested in benefits salaries than they are in education.

Robert S. Gill
Montpelier,

I would like to correct one point in story. Rather than: "And many ployees, union and nonunion alike, suffer, whether they know it or r the sentence should read: "And m employees, union and nonunion al *and companies* will suffer...."

Mary L. Partri
Miles City, M

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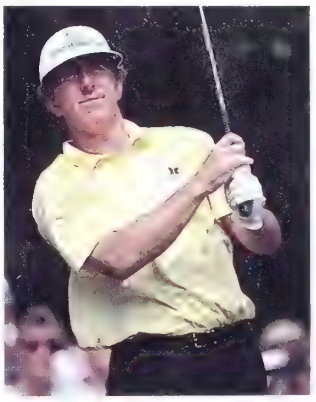

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Captain
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JOB ONE IN AMERICA: BETTER JOBS

When major industrialized nations gathered in Detroit last March for a jobs conference called by President Clinton, the U. S. seemed to hold the high ground. After all, some 20 million jobs have been created in the U. S. since 1980, and the unemployment rate keeps sliding as the economy recovers. All of Europe has generated only a few million jobs since 1980, and its jobless rate hovers around 10%. Many European leaders blame their countries' high wages, generous benefits, and extensive social safety nets. They point to America's flexible labor markets as a model.

But anyone who thinks the U. S. is on the right track should grab a copy of *Working Under Different Rules*, edited by Richard B. Freeman, a Harvard University labor economist who also runs a comparative labor studies program at the London School of Economics. Five chapters summarizing five books commissioned by Boston's National Bureau of Economic Research for an impressive four-year project involved dozens of academics who compared U. S. labor markets with those in Western Europe, Canada, Japan, and Australia. The conclusion: The U. S. has performed worse in terms of improving standards of living than most other industrialized countries. Indeed, the book suggests the U. S. can learn as much from them as they can from the U. S.

Yes, the U. S. has created scads of jobs. But providing employment isn't enough. What matters is delivering the highest living standards for the most people—and that requires jobs that pay well. Because Europe's productivity growth has topped America's for nearly two decades, its wages and benefits have grown faster. When you combine jobs and wages and look at per-capita gross domestic product—the broadest measure of living standards—Europe has performed better over the past 20 years.

The U. S. also has more poverty and worse income inequality. In fact, the book's most startling revelation may be just how badly the poorest workers fare compared with those in other advanced economies: U. S. men in the lowest 10% of wage-earners, for example, earn 30% of what similar men make in Italy.

Why has the U. S. failed to deliver the goods? The book has bad news for rigid free-marketeers. It concludes that the U. S. relies too much on supply and demand in a highly decentralized labor market. One result: rising inequality. Market forces such as soaring imports and new technologies have driven up the pay of college-educated Americans and undercut the wages of less-skilled workers. The result is the biggest surge in family-income inequality since the Depression. The same forces affected Europe, but its centralized wage-setting institutions kept inequality down.

In Germany, for instance, strong

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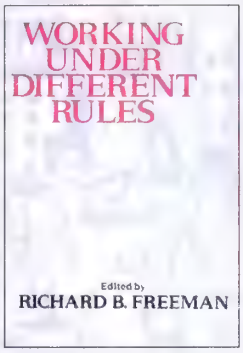
loreover, the free
ket doesn't deliver
igh worker training,
book finds. Surprisingly, it points
that the U. S. spends about the same
Europe—roughly 1.5% of corporate
olls. But because many Americans
p companies after training, U. S. em-
ers tend to train in job-specific skills,
the more general ones that keep
work force competitive. "The econo-
can become locked into a lower
ning equilibrium" than is needed to
p productivity growing, the book
ns. One proposal: a European-style
onal system to certify skill standards.

The goal isn't just jobs but a rising standard of living for most people. By that measure, Europe wins



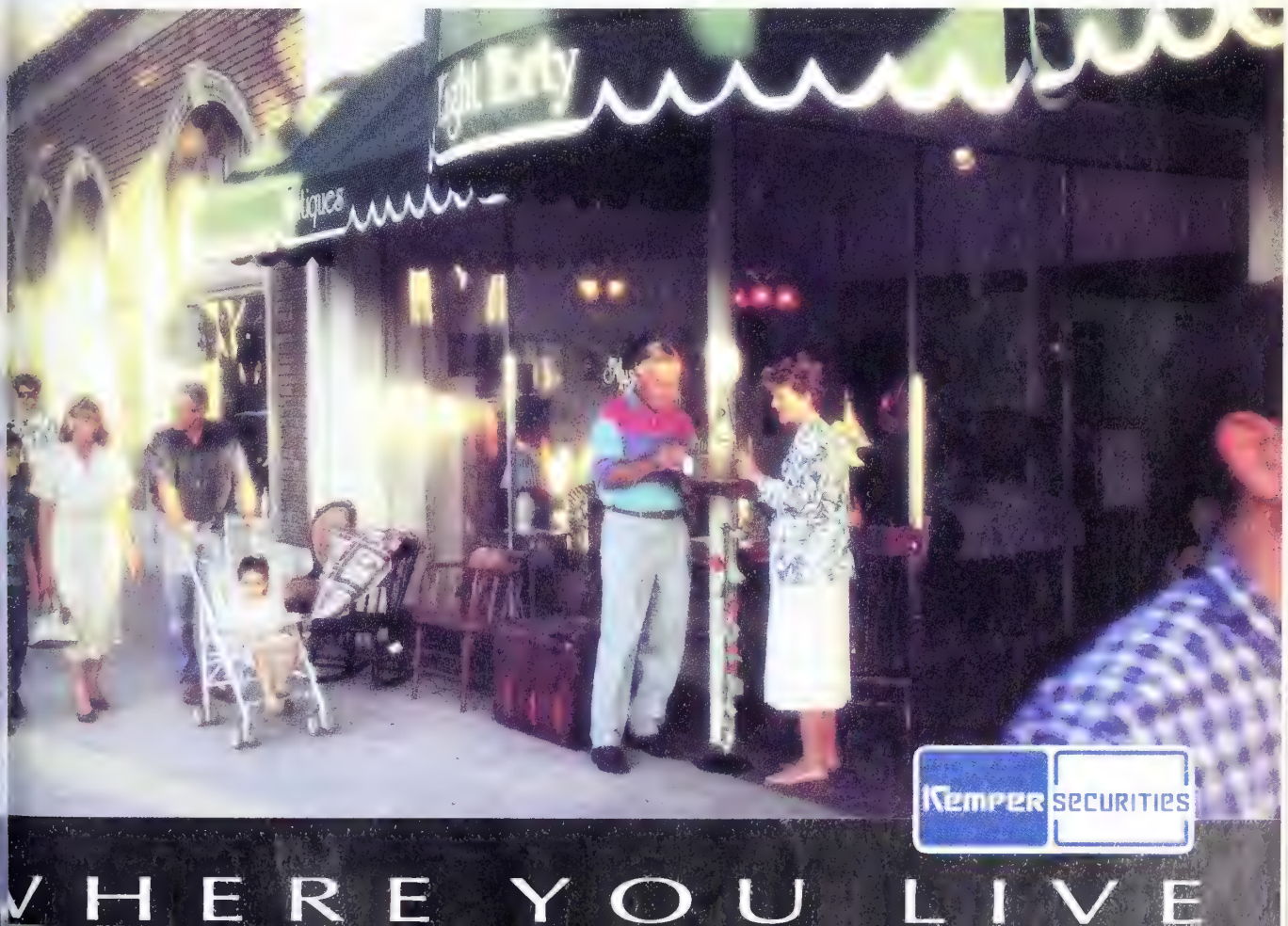
Many U. S. economists will have a quick retort to all this: It's inefficient to interfere with markets, and jobs will be lost if you do. Freeman & Co. agree—to a point. High minimum wages do boost youth unemployment in France, their studies show. Generous benefits ratchet up unemployment, too. But Europe's labor markets adjust to change in ways that reduce the effect on jobs. Instead of slashing pay and firing workers when demand sours, German companies adjust each employee's hours. And many European social programs require people to work to receive benefits.

As a result, European countries have gained enough economic growth from higher productivity to more than offset higher unemployment and more costly social programs. Plus, as a result of those programs, many of their jobless fare better than U. S. low-wage workers. "Our study of a host of different programs... shows that, in general, these programs do not have major efficiency costs," says Freeman in the final chapter, "Lessons for the U. S."

Freeman is quick to note that the U. S. can't simply copy what others do. But it can adapt their ideas. The Clinton Administration is trying just that with apprenticeship and training programs. Given the conclusions of *Working Under Different Rules*, however, the U. S. may need to go much further to get the average American's living standards rising again.

BY AARON BERNSTEIN

Bernstein reports on the workplace.



EDITED BY STEPHEN H. WILDSTROM

THE PDA MAY NOT BE DOA AFTER ALL

Will radio rescue the personal digital assistant?

Since Apple's Newton and its ilk hit the market last year, potential buyers have been trying to figure out just what their use might be. For all too many, the answer has been: not much. Apple's improved MessagePad 110 has failed to find a mass market since its introduction in March, AT&T's Eo bombed, and BellSouth has delayed introduction of Simon to rethink the product.

The problem with the Newton is fundamental: Its use as an electronic notepad, calendar, and phone book is crippled because it's hard to get information into it. The thrill of watching a machine translate your handwriting quickly turns to frustration with its slowness and errors. And while Newton handles fax and e-mail, first you have to find a phone line. It offers truly mobile communications only as a sort of superpager, using a receive-only radio unit from BellSouth's MobileComm.

Motorola's Envoy, due out this summer, could save the PDA by redefining it as a communications device—or as Motorola calls it, a personal wireless communicator. Priced at about $1,500, the Envoy costs some three times as much as a Newton. But it can connect either over phone lines or by radio in a 1.7-pound package that's about 25% bigger than a Newton.

The heart of the Envoy is General Magic's Magic Cap operating software and Telescript communications program—software likely to turn up on a variety of equipment. Instead of Newton's handwriting recognition, Magic Cap uses a miniature on-screen "keyboard" that you operate by tapping the "keys" with a stylus. I found it much easier to use than either handwriting or the Newton's much tinier keyboard.

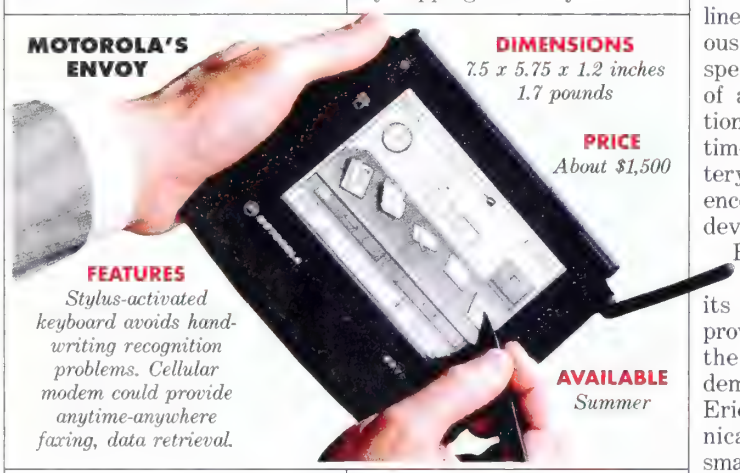
Telescript drives Envoy's most impressive features. Motorola is bundling the machine with the services that can keep you in touch with the office and the world. For example, the built-in electronic-mail software and radio modem are designed to work with Radiomail's wireless e-mail services, available in major metropolitan areas. Other software lets you log into America Online or CompuServe and get travel information from Official Airline Guide's FlightLine service.

Potentially the most interesting on-line service will be AT&T's PersonaLink, a new "smart" network being built to work with Telescript. The service, which AT&T says will be available when Envoy is rolled out, will let you issue a set of orders to the network. Intelligent programs, called "agents," will then do your bidding, from arranging for flower deliveries to shooting closing prices on your stock portfolio into your Envoy each afternoon. If all works, you'll be able to fulfill the old dream of carrying much of your office in a small briefcase or a large pocket.

SLOWPOKES. As always, that's a big if. These fancy new services now exist mainly on paper. And while wireless communications free users from the tyranny of finding and connecting to a phone line, radio systems have serious flaws of their own: The speed is barely a third that of a good telephone connection, while the cost is several times higher. And both battery life and internal interference are major challenges for devices as small as PDAs.

Even if the Envoy falls short of Motorola's hopes, its technology will likely prove a boon to executives on the run. Current radio modems made by Motorola and Ericsson GE Mobile Communications are the size of a small brick and weigh about a pound. Both Motorola and Ericsson have developed credit-card-size models that could make laptop computers and other PDAs truly mobile communicators. Existing services allow such a device to connect with corporate e-mail, commercial systems such as MCImail, and Internet mail.

General Magic, whose owners include Apple, AT&T, Motorola, and Sony, will make Magic Cap and Telescript available on a variety of computers—portable and deskbound. That could give computer users communications options that they can only dream about today. *S.W.*

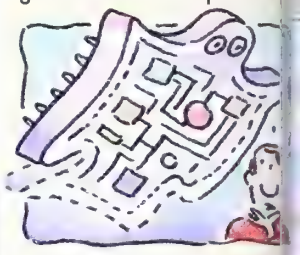


BULLETIN BOARD

COMDEX SHOW

IBM'S 'BLACK BOXES'

The most eagerly anticipated hardware of the recent Spring Comdex/Windows World trade show in Atlanta proved to be something of a phantasm. The must-see hardware was the PowerPC processor developed by Motorola, Apple, and IBM. True, Apple's new Power Macs were running some impressive graphics at the Motorola display. But Comdex is geared to IBM-compatible



systems, and PowerPC IBMs were rare. You can now buy an IBM PowerPC only as a $5,000-plus RS/6000 workstation. The IBM display featured mysterious PowerPC computers, literally black boxes, that the company described as "the unannounced product." If there's no sense of urgency, perhaps there's reason: All the features of the new version of Microsoft Windows, promised for Intel-based personal computers by yearend, probably will not be available for the PowerPC until late 1995.

MULTIMEDIA

'YEOW! TURN THAT DOWN'

Multimedia computer systems may or may not be better or easier to use, but they certainly are noisier. The boom-box displays of such companies as Creative Laboratories, makers of the aptly named SoundBlaster board, filled the Georgia World Congress Center with an eardrum-piercing din that undoubtedly sold more aspirin than computers.

Questions? Comments? techandu@mgh.com on Internet or fax (202) 383-2125

One of those rare occasions when he sequel is even better than the original.

chnologically speaking it had no vals. It had innovations designed to otect its passengers and e planet on which they e. And seventeen awards cluding Best Car in the World in class for three years in a row.* So what do you do next? At ercedes-Benz you have a cup of ffee and get back to work.

Which brings us to the 1995 Class sedans. Even standing still e S320 easi- leaves other rs behind.

Even the low beams now perform 35% better.

e wheelbase has been lengthened d the body streamlined for a eeker, more elegant look. But get a good look because its 3.2 liter in-line 6 can take it from 0–60 in 8.9 seconds, a mere four-fifths of a second behind its 8-cylinder counterpart.**

Introducing the New S-Class

Though Mercedes-Benz invented the crumple zone and helped pioneer the air bag, it's the accident avoiding capabilities of the S-Class that are its most impressive safety features. Recirculating ball steering provides handling precision more typical of sports cars than luxury automobiles and, standard for 1995, every S-Class automobile will have a sophisticated traction control system. Even the telephone is voice activated so you need not take your hands off the wheel.***

For every new S-Class there's a standard traction control system.

Finally, there's one last line that's been streamlined. The bottom one. Which is in itself a feat of engineering when you consider IntelliChoice's The Complete Car Cost Guide named the 1994 S320 and S420 sedans among the cars named "Best Overall Value" in their class.

Call 1-800-FOR-MERCEDES for more information on the 1995 Mercedes-Benz S-Class, a car with only one rival. Its predecessor.

The New S-Class

to motor und sport, Germany **Stated rates of acceleration are based upon manuf.'s track results & may vary depending upon model, environmental & road surface nditions, driving style, altitude above sea level & vehicle load. ***Standard equipment on S600 optional on all other S-Class models. For safety reasons, the driver ould not use the cellular telephone while the vehicle is in motion. ©1994 Mercedes-Benz of North America, Inc., Montvale, N.J., Member of the Daimler-Benz Group.

WHAT'S FLYING OUT THE OZONE HOLE? BILLIONS OF DOLLARS

BY PAUL CRAIG ROBERTS

The evidence suggests that CFCs aren't harmful. But the propaganda of the Chicken Littles has prevailed over science—and the cost of needlessly replacing cooling equipment will be staggering

Get ready for a big hit on your wallet: On Dec. 31, 1995, production of chlorofluorocarbons (CFCs) such as freon, the primary cooling agent in air conditioners, refrigerators, and freezers, will be banned, necessitating replacement or retrofitting that could cost hundreds of billions of dollars.

A colleague who serves on the board of a cooperative apartment building in Arlington, Va., recently received a notice from the Environmental Protection Agency (EPA) urging owners of air-conditioning equipment to "act now and prepare for the phaseout of CFCs. Owners are advised to begin the process of converting or replacing existing equipment with equipment that uses alternative refrigerants." The estimated cost of retrofitting the 12-story building's air-conditioning system: $400,000.

Offices, shopping malls, hospitals, hotels, schools, supermarkets, colleges, churches, factories, and owners of homes, cars, refrigerated trucks, railroad cars, and ships all face expensive cooling-changeover costs.

Car air-conditioning repair costs have already exploded. What was once a minor expense can now cost as much as $1,000—more than fixing a failed transmission. Many home air-conditioning systems will have to be replaced when they lose their existing coolant.

Invented in the 1930s as safe, nonflammable, and inexpensive alternatives to deadly air-conditioning coolants, such as one that leaked and killed 100 people in a Cleveland hospital in 1929, CFCs were once highly esteemed. In the 1970s, however, they were demonized on the basis of speculative theorizing. Allegedly, CFCs percolate up into the stratosphere, release chlorine, and destroy the ozone shield against ultraviolet radiation from the sun, causing increased skin cancer among humans.

NO DEPLETION. H. L. Mencken said that "the whole aim of practical politics is to keep the populace alarmed by menacing it with an endless series of hobgoblins, all of them imaginary." Ozone depletion seems to be such a hobgoblin. Fred Singer, the University of Virginia scientist who invented the satellite ozone monitor, has noted that no global reduction of ozone levels has been detected. Moreover, measurements show a decrease in ultraviolet radiation reaching the earth's surface, and a recent study by Brookhaven National Laboratory scientist Richard Setlow published in the *Proceedings of the National Academy of Sciences* finds that malignant melanoma is caused by a type of ultraviolet radiation not absorbed or blocked by ozone.

The evidence for ozone depletion is the hole in the ozone that has recently been no over the Antarctic for a couple of mont year. Whether or not CFCs are involved, scientists regard the ozone hole as a purel calized phenomenon due to the exceedi cold polar night that freezes nitrogen o (which inhibit chlorine chemistry) out o stratosphere. When temperatures rise, ozone hole disappears.

Other scientists believe the ozone hole natural and transitory phenomenon relate sea temperatures, volcanic eruptions, tro wind patterns, and sunspot cycles. Actual torical readings of Antarctic ozone level inconsistent with the CFC buildup the Ozone levels in the 1960s and 1970s were t as high as in the 1950s.

"DEADLY RAY GUN"? Whatever the true s turns out to be eventually, propaganda prevailed over scientific fact up until now, a government policy that is going to im undue hardship on us all has run far in vance of the evidence. Vice-President Al has portrayed CFCs as fiends that have tu the sun into a deadly ray gun that threa all life on earth. "We have to tell our dren," he shrilled, "that they must red their relationship to the sky, and they begin to think of the sky as a threate part of their environment."

Ronald Bailey, former producer of the lic Broadcasting System's *TechnoPolitics* gram, dismisses the dire predictions of gl disaster in his book, *Eco-scam*. Huge fina and bureaucratic vested interests are interwoven with quack prophecies of ecolo apocalypse. Last year, Princeton Univer scientist William Happer was asked to re from the Energy Dept. for questioning G apocalyptic line on ozone depletion.

Melvyn Shapiro, chief of meteorologica search at the National Oceanic & Atmosp ic Administration, says: "It's money, pu money. If there were no dollars attache this game, you would see it played on inte and integrity." But dollars are attached February, 1992, scientists at the National A nautics & Space Administration announce a press conference the discovery of a se ozone hole, this one over the Arctic. It nothing but a tactic to get some crucial N funding past Al Gore's Senate Commit NASA retracted its "discovery" two months er. But by then, it was too late. A panic President Bush had already pushed the ba chlorofluorocarbons forward to 1995 from year 2000—by which time the ozone-deple hysteria would have abated under the gro pressure of evidence.

PAUL CRAIG ROBERTS IS CHAIRMAN OF THE INSTITUTE FOR POLITICAL ECONOMY IN WASHINGTON

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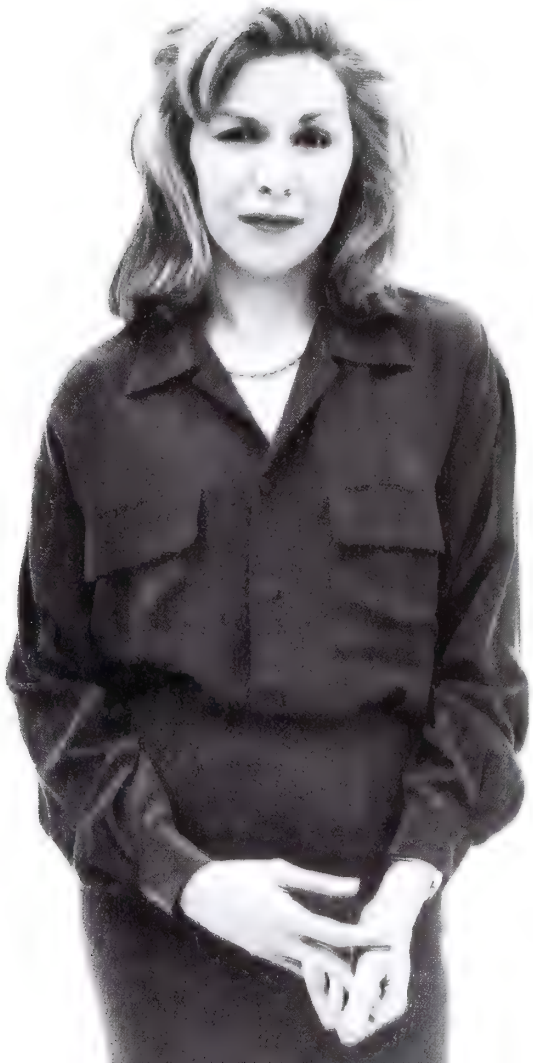

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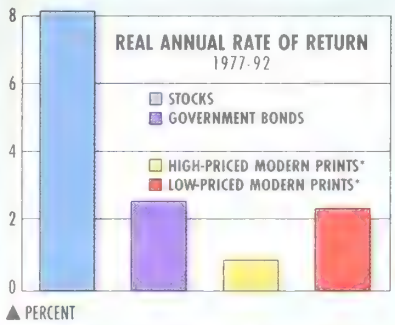
BY GENE KORETZ

WHY PLAYING THE ART MARKET CAN BE RISKY BUSINESS

Economists have long sought to compare the art market's functioning with that of the financial markets. A major difficulty, however, is that each art work is unique and may remain in the same hands for decades.

In a recent study, economist James E. Pesando of the University of Toronto avoids this problem by focusing on the prices of modern prints—specifically prints by 28 renowned artists, such as Picasso, Matisse, Miró, Munch, Chagall, Klee, Hopper, and Whistler. Such prints were usually produced in editions of 50 to 100 or more, and several prints of the same work are often sold within the space of a few years. Thus, Pesando was able to analyze 27,961 repeat sales from 1977 to 1992 at leading auction houses in the U. S. and Europe.

INVESTING IN ART: A VERY MODEST PAYOFF



*PRINTS OF 28 WORLD-RENOWNED ARTISTS ESTABLISHED BEFORE WORLD WAR II. HIGH-PRICED AND LOW-PRICED PRINTS ARE THE TOP AND BOTTOM 10% OF PRINTS (BY PRICE) SOLD IN 1977.

DATA: JAMES E. PESANDO, UNIVERSITY OF TORONTO

Over those 16 years, reports Pesando, prints turned in an average annual inflation-adjusted return of just 1.5%, compared with real returns of 8.1% and 2.5% posted by stocks listed in Standard & Poor's 500-stock index and government bonds. Although this was a volatile period, in which real print prices more than doubled and then dropped 45%, the return on prints even at the peak of the price bubble in early 1990 still lagged behind that of stocks.

The study also failed to support the claims of many art experts that it's better to invest in a "masterpiece" or high-priced work of art than a cheaper work. In fact, a portfolio composed of the 10% of prints that were lowest in price in 1977 (selling for $1,500 or less) produced an average annual real return of 2.3% over the 1977-92 period, compared with just 0.9% for a similar portfolio of prints that originally sold for $15,000 and up.

Moreover, Pesando found some striking anomalies. For example, the prices of identical prints sold within 30 days of each other often varied by as much as 30% or more. And prints sold at Sotheby's in New York tended to bring about 14% more than identical prints sold by Christie's in New York, though no such disparity showed up in the two firms' auction houses in London.

The art market, observes Pesando, is "no place for amateur investors."

VALUE VS. GROWTH: GUESS WHICH STOCKS ARE THE WINNERS

For at least 60 years, so-called value investors have advocated buying stocks that have low prices relative to current earnings, cash flow, or other measures of intrinsic value. Growth investors, on the other hand, have pushed glamour stocks with high price-earnings ratios as a way to capitalize on the growth potential of successful companies that have won market approval.

A recent National Bureau of Economic Research study by Josef Lakonishok, Andrei Shleifer, and Robert W. Vishny weighs the evidence in copious detail. And its conclusion, based on an analysis of the performance of all stocks listed on the New York and American Stock Exchanges from 1968 to 1990 is that the value strategy wins hands down.

The researchers compared the performance of the 10% of stocks with lowest prices relative to earnings, cash flow, dividends, or book value in each year from 1968 to 1985 with the 10% of stocks in that year with the highest price multiple relative to the same variables. They found that no matter what year they chose or what variable they looked at, the lower-priced value stocks outperformed the high-flying glamour stocks over the subsequent five-year period (though not in every single year) by a significant margin.

Net returns averaged 7.8% a year higher in the case of price-to-book-value ratios and 8.8% a year higher in the case of price-cash-flow ratios. In other words, investing in the 10% of stocks with the lowest multiples in any year would have produced five-year cumulative returns 38% to 43% larger than those produced by investing in the 10% of stocks with the highest multiples.

The researchers also reject the a ment that low-multiple stocks ou form glamour stocks because th riskier. Although value stocks are more volatile than glamour stocks, found that the volatility was concer ed on the upside. In other words, stocks tend to fall less than gr stocks (and stocks overall) in bear kets and rise more in bull markets

The mystery, of course, is why i tors haven't shifted more toward stocks (and thus reduced the large rential in stock returns). One possi is that institutional traders have short time horizons. Another ma that investors are more interested i dividual companies than in statistic vestment formulas, and glamour st have a good story to tell. Whatev reason, however, value investing ha a remarkably consistent track reco

A JUMP IN EXECUTIVE HIRES SIGNALS A GLOB SURGE FOR SALES

If Korn/Ferry International's latest vey of its 1,500 clients is any in tion, corporations spy a global ex sion ahead. The executive-search reports that worldwide demand for ior executives came in 21% higher quarter than its year earlier level.

The biggest rise last quarter wa corded in Europe, where executive ing was up by 36%, followed by ga 26% and 15% in North America and in America. Only in Asia did execu hiring slip by 2%, as Japan's rece offset stronger hiring in several growing Pacific Rim nations. A K Ferry spokesman says that surgin mand for marketing and sales ex tives points to "tremendous new sumer markets on the horizon."

AMERICA'S GROWTH CHAMPS AREN'T TOUCHING THE BRAKES

America's hottest businesses are ing their sights. Coopers & Ly reports that the top executives o nation's 400 fastest-growing compa as identified by BUSINESS WEEK and er publications, now expect their sal rise by 31% over the next year. T up from a 25% rise anticipated a months ago. In addition, 81% of the growers say they will add workers the next 12 months, and 62% pla boost investment spending.

If Penny Scott had a ValuePoint™ with a three-year warranty, she could spend her time worrying about what's really important – like her annual review, the slides for the meeting and her two-year-old son's recent mastery of the word "no."

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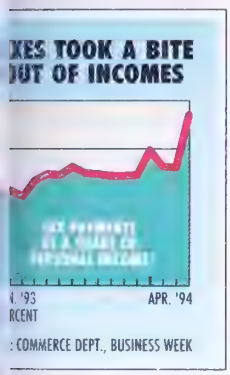
: 13, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

JST WHAT THE DOCTOR ORDERED: LOWER GROWTH

or months now, the financial markets have been terrified that the U. S. economy is on a growth rampage and that faster inflation is inevitable. But ther or not the markets choose to believe it, the latest strongly suggest just the opposite: The economy is, act, losing steam.

he loss of momentum is showing up in two key sec: consumer spending and manufacturing. In particular, first signs that higher interest rates are crimping sing are starting to crop up. And the rising trend of nployment claims suggests that job growth this sumis set to slow from its rapid pace in the spring.



Hold on. There's nothing to worry about. A slowdown in growth from the 7% sprint at yearend 1993 to a more sustainable pace would be a positive development that would limit further rate hikes by the Federal Reserve. And when Wall Street finally notices, the financial markets, even the moribund bond market, should perk up.

Of course, in recent weeks, ing has been able to pierce the bond market's armor. nall upward revision to first-quarter growth in real s domestic product, from 2.6% to 3%, was enough to the U. S. bond market into another tailspin, pushing -term interest rates even higher. That, plus worries rapid money growth in Germany will stymie furrate cuts by the German Bundesbank, also took a y toll on European bonds.

ever mind that the driving force behind the upward sion was a quirky, and completely unexpected, turnnd in federal nondefense outlays. They were originalported to have dropped at an annual rate of 7.6%, but they show an 18.3% surge—a swing of $7 billion, out which GDP would have been revised down.

NSUMERS AY SAVE ORE—AND END LESS

But that's history. What about the second quarter? Growth this quarter isn't shaping up to be much faster than it was last quarter. The biggest reason is a slowace of consumer spending. During the past year, real ays for goods and services have grown 4%, far ahead e 2.6% pace of real aftertax income. That pattern canhold, especially with the refinancing windfall now ely exhausted and with interest rates on the rise.

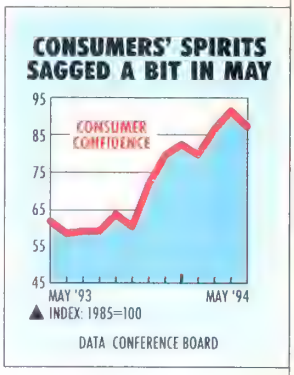
First-quarter growth in consumer spending was revised up from a 3.8% annual rate to a 4.6% pace, marking the third-consecutive quarter that outlays have risen close to a 4.5% rate. However, spending tanked in April, falling an inflation-adjusted 0.4%. That was the result of a bigger tax bite on the wealthy (chart), an early Easter that drew sales into March, and some impact of rising rates.

That means second-quarter outlays, so far, are growing at an annual rate of only 0.8%. Spending for the quarter is likely to grow at only about half of the first-quarter pace, or less. That's because May consumer buying looks weak as well. Seasonally adjusted sales at department and chain stores in May dropped a steep 2.6% from April, according to a survey by the *Johnson Redbook Report*. Auto sales appear to have plateaued. And consumer confidence in May slipped a notch.

JITTERS OVER JOBS AND RISING RATES

Rising interest rates and continued job worries resulted in a decline in the Conference Board's index of consumer confidence to 87.6, from 92.1 in April (chart). Households gave a decidedly more downbeat assessment of their current situations, and a third of the respondents reported that jobs were "hard-to-get," up from 29% in April.

That assessment, plus the rising trend of first-time claims for unemployment benefits, suggests that the rapid pace of job growth in March and April will not be maintained in coming months. Ignoring the weather-related jump in layoffs last winter, the four-week average of new claims in mid-May has increased to the highest level in a year and a half. Employment growth should remain solid, just not as brawny.



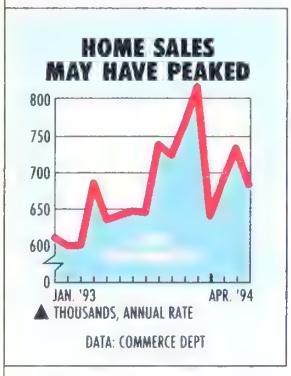
It had better hold up. Consumers are more dependent than ever on income growth to support their spending. In April, personal income rose 0.4%, following March's 0.6% advance. Rising wages and salaries, reflecting more jobs and a longer workweek, accounted for about half of the April gain.

However, after higher prices and taxes, real disposable income, which is more closely correlated with spending, dropped 0.5%. Tax payments jumped a hefty $35 billion in April, much of which came out of household savings. Savings as a percentage of disposable income

dipped to a skimpy 3.5% in April. During the past half year, the savings rate has averaged only 3.7%, the lowest for any six months in 4½ years. That's so puny that consumers are likely to use some of their income gains in coming months to rebuild their nest eggs, which will leave less income for the shopping malls.

HOME BUYERS' HIGHER HURDLES

At the same time, higher interest rates are slowing housing demand and purchases of home-related durable goods, two sectors that were big contributors to growth last year. In fact, higher rates may already be taking a toll. Sales of new single-family homes dropped 6.8% in April to an annual rate of 683,000 (chart), and the nation's homebuilders report that buyer traffic in May was off sharply from its December peak.

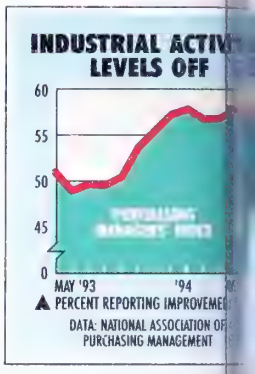


With 30-year fixed-rate mortgages averaging 8.68% in late May, according to HSH Associates, and with new mortgage applications falling, weaker sales are not surprising. Mortgage rates are up nearly two percentage points from their October lows, a rise that adds about $140 to the monthly payment on a $100,000 mortgage. That's enough to present a big hurdle for some potential home buyers, especially first-timers.

In fact, home buying may have peaked already. April sales were slightly below the first-quarter average, which was well below the strong fourth-quarter showing. Still, sales might make one last stand. The University of Michigan's May consumer survey of home buying conditions showed a surge in households who think it's a good time to buy in advance of rising rates. But even if that demand materializes, housing should be a drag on second-half economic growth.

In the face of higher interest rates and slowing domestic demand, manufacturing activity seems dest to taper off, as well. Already, factory orders for dur goods, which are especially sensitive to interest r dipped in April. Moreover, the National Associatio Purchasing Management reports that industrial activit May leveled off (chart).

The purchasing managers' index stayed at 57.7% month, no higher than it was back in January. Alth the NAPM's price index rose to 71.5% from 63.2% in A which sent the bond market into another tizzy on morning of June 1, the index of new orders fell, and production index fell for the second consecutive mon



Auto makers and parts suppliers are likely to see the sharpest cutbacks in the second quarter. According to vehicle production schedules, the seasonally adjusted annual rate of May output, to be reported in the Federal Reserve's summary of May industrial output on June 15, will be down considerably from the April rate. That drop would also have an impact on parts suppliers, and it would exert a major drag on ond-quarter industrial production and on real GDP gro as well.

Clearly, the economy is not in any recession dan from rising rates, at least not yet. In fact, if the gro slowdown continues to emerge amid further signs tha flation isn't even on the radar screen, the combina would be just the tonic that the financial markets craving. In particular, it might even bring the bond m ket out of its funk and set the stage for lower long-t interest rates. And in the longer term, swapping slo growth for lower long rates could extend the life of expansion.

THE WEEK AHEAD

INSTALLMENT CREDIT

Tuesday, June 7

The April level of consumers' outstanding installment debt is expected to have risen by a hefty $5.8 billion, following a large $7.4 billion increase in March. That's the median expectation of economists surveyed by MMS International, a unit of McGraw-Hill Inc. Better growth in jobs and income is making it easier for households to borrow. However, since earnings are rising apace with new debt, the ratio of installment credit to aftertax income has not risen appreciably. In March, the ratio stood at 16.4%, well below its peak of 18.7% in 1989. Credit growth may soon begin to slow, though, since sharply higher interest rates are likely to cool off the recent spending boom in consumer durables.

CAPITAL SPENDING

Thursday, June 9, 8:30 a.m.

Corporate America is likely to stick with its upgraded plans for greater investment in new buildings and equipment in 1994. The Commerce Dept.'s survey will probably show that businesses expect to boost their spending this year at about the same 8% increase from 1993 that they had indicated in the survey taken earlier this year. That planned advance was up considerably from only 5.4% in the previous survey, which was taken last fall.

PRODUCER PRICE INDEX

Friday, June 10, 8:30 a.m.

Producer prices for finished good May probably rose a scant 0.2%, acc ing to the MMS survey. That slim would follow April's 0.1% decline, it would be another signal that in tionary pressure further back in the tribution process remains absent. cluding prices of energy and food, w volatility tends to distort the trend, core PPI probably rose a faster 0 The slight pickup in the pace of ov prices in May partly reflects the re uptick in crude oil prices. Crude pr rose by about $3 per barrel from end of March to the end of May.

AIRFOTO-MENA BW

Give her your closest shave. The Norelco Razor.

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Comfortably.

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The Norelco® Razor. Our Closest Shave. Ever.

Howard Stringer should have been jubilant during the weekend of May 22. The president of CBS Broadcast Group was traveling to Britain for dinner with Prince Charles, who was celebrating his 25th anniversary as the Prince of Wales. In those 25 years, Stringer had risen to become the top operating executive at CBS Inc. and one of the most eloquent champions of traditional broadcasting in America. By reviving his network's ratings and luring David Letterman from NBC Inc., he had even convinced his saturnine boss, CBS Chairman Laurence A. Tisch, that broadcasting could be fun again.

Throughout the weekend, though, Stringer says he had a bad feeling that something back home was amiss. On the previous Thursday, one of CBS's most powerful affiliates, New World Communications Group, had abruptly canceled a meeting to discuss TV syndication. Stringer wasn't sure what New World had up its sleeve. But from previous sessions with company executives, he knew its principal backer, financier Ronald O. Perelman, had ambitions that went well beyond airing CBS shows on its affiliates.

Sure enough, New World dropped a bomb on May 23, announcing it would switch all 12 of its stations—eight CBS, three ABC, and one NBC—to Rupert Murdoch's Fox Broadcasting Co. In return, Murdoch would pay $500 million for a 20% stake in Perelman's company. Overnight, CBS lost stations that reach some 10% of its national audience.

"UNDER CONTROL." Worse, unless it can poach affiliates from ABC or NBC, the network could be left with Fox's lower-powered stations in such critical markets as Dallas, Detroit, Atlanta, Cleveland, Tampa, and Phoenix. Within days, CBS was hit with rumors of further affiliate defections in Buffalo, Boston, and Charlotte. Rumors resurfaced that a disheartened Tisch might sell the network. Indeed, executives at all three networks began asking whether the whole affiliate system had come unglued. Rattled, Stringer called Tisch from overseas to ask whether he should skip the dinner and fly home to New York. Tisch said no. "I knew this meant a lot to him," Tisch told BUSINESS WEEK. "And everything here was under control."

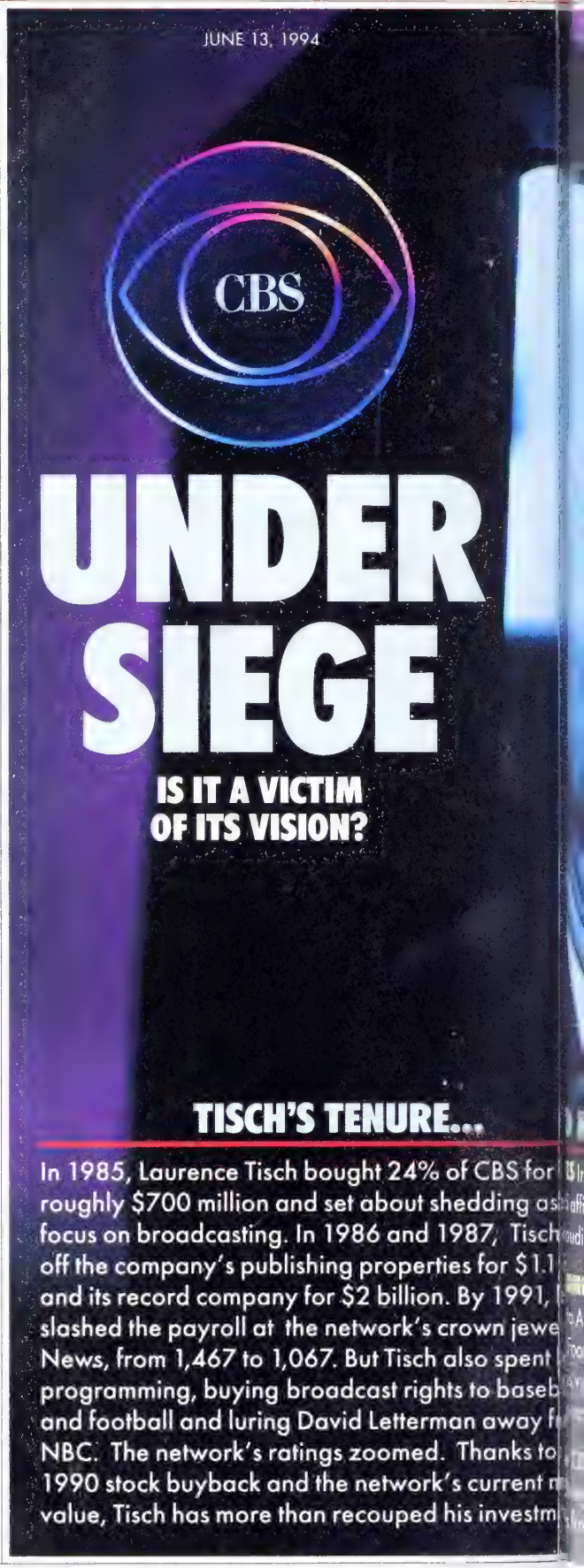
Well, perhaps. CBS Inc. is hardly going out of business. The network is No. 1 in the ratings and had record 1993 earnings of $326 million on revenue of $3.51 billion. Tisch insists the New World defections "have been blown out of all proportion." He says they will cost CBS a mere $8 million in lost ad revenue and the expense of signing up new affiliates. Yet Murdoch's blitzkrieg has clearly left CBS shaken. Says Stringer: "It's an irony that the champions of broadcasting are the ones most hurt by this whole thing."

The real irony, say media experts, is that Tisch's narrow focus on broadcast could actually make a bad situation worse. In the eight years since he took over CBS, the 71-year-old investor, also chairman of Loews Corp., has concentrated doggedly on network TV—to the exclusion of anything else. His strategy for the network of Murrow and *M*A*S*H* boils down to four words: boost ratings, cut costs.

Now, as he confronts a tectonic shift in his industry, several observers believe Tisch's lack of vision could come back to haunt him. "He's been rowing upstream for the last four or five years, refusing to get into cable, refusing to take on strategic partners," says Porter Bibb, an investment banker at

NARROW FOCUS

Tisch's broadcast-only strategy has succeeded so far, but it could come back to haunt him



D HIS MOUNTING PROBLEMS

ES In late May, Fox Broadcasting lured away
6 affiliates, accounting for 10% of the network's
audience. Other defections are rumored.

MMING In May, 1993, CBS lost Major League
to ABC and NBC, and in December, the NFL's
Football Conference to Fox. Its prime-time
is vulnerable because of aging shows, few new
a resurgent ABC.

e CBS Evening News with Dan Rather and
hung is likely to lose a disproportionate share
s from the defection of affiliates to Fox.

Ladenburg, Thalmann & Co. who recently published *It Ain't As Easy As It Looks*, a biography of Ted Turner. Adds Christopher Dixon, a media analyst at PaineWebber Inc.: "Networks that are one-trick ponies are liable to feel an inordinate amount of pressure."

Certainly, NBC and ABC don't welcome Murdoch's midnight raid either: It will increase the cost of doing business for everybody. But they derive much of their growth from cable programming, overseas expansion, and other media assets. CBS, by contrast, is a pure-play network. As broadcasting goes, so goes Tisch. And for the moment, anyway, that's nowhere good. Says Bibb: "He may have overstayed and overplayed his hand at the network table."

In retrospect, Tisch's troubles seemed almost inevitable. Rupert Murdoch, a man whose vision is as sprawling as Tisch's is narrow, was willing to move mountains to catapult Fox into the front rank of networks (page 34). He began last December by bidding $1.6 billion for rights to the NFL's National Football Conference, $400 million more than longtime incumbent CBS. Murdoch then used football as a lure to fish for several of Tisch's 206 affiliates.

Stringer derides Fox as a network of "downscale comedies and titillating soap operas." True enough. But Murdoch understands that more and more station owners no longer desire a full-service network. Some, such as New World, want to produce and air their own shows. Others want the freedom to buy more syndicated programs. Even before Perelman's move, New World stations were delaying the *Late Show with David Letterman* to run other shows. Because Fox airs only 15 hours of prime-time programming a week, compared with the Big Three's 22, and no daytime or late-night programs, Murdoch can offer station owners airtime.

STATION IDENTIFICATION. Tisch can't. With higher costs and less syndication revenue than Fox, CBS must air the vast majority of its schedule throughout the country to remain viable. That's why Tisch's rivals expect him to be relentless in his pursuit of new affiliates. "They're going to do what they have to do," says Neil S. Braun, the new president of the NBC Television Network. It will be a grueling and costly battle: Network executives will have to spend the next few months cajoling prospective CBS affiliates in the New World markets while scrambling to head off Fox in other markets.

Tisch says he relishes the prospect. "This has reenergized the whole company, including me," he says. Indeed, the tough-minded CEO isn't without weapons to fight back. CBS says it may extend contracts with affiliates to five years, from one now. The network, which already owns seven stations, may buy more. CBS may also make an equity investment in a station group. Rumors have Tisch working on a deal with Scripps Howard Broadcasting, in which Scripps would switch its ABC affiliates in Detroit and Cleveland to CBS in return for CBS picking up Tampa and Phoenix stations that were dropped by Fox in the Perelman deal.

While Tisch denies it, several former CBS executives say he will also have to boost affiliate compensation—the cash he pays the stations to air everything from *60 Minutes* to Letterman. CBS currently spends about $120 million on affiliate compensation—a figure Tisch has steadily reduced over howls of protest from the stations. Now, though, the leverage has swung back to the stations (page 36). One former senior CBS executive predicts that within two years, Tisch will have to double the current compensation.

Tisch will be helped in his campaign by having a team of executives who understand affiliates. In addition to Stringer, CBS will be represented by CBS Television Network President Peter A. Lund, a former president of station owner Multimedia Inc., and Anthony C. Malara, president of affiliate

relations, who once ran a CBS station.

Lund says the team will focus first on the six markets immediately affected by New World's deal (Perelman has announced plans to buy two more CBS stations in Dallas and Austin; their affiliations will switch later). Even in just six markets, the mating dance quickly becomes complicated. Many prospective CBS affiliates are members of larger groups. For CBS to lure a strong one, it may have to agree to take on a weaker station in another market, as in the rumored Scripps deal. With Scripps, Meredith, Washington Post, Gannett, and Cox Enterprises each owning at least one station in the six markets, says Lund, the game of musical chairs could rearrange affiliates in 20 cities.

However complex the talks, Tisch notes that CBS boasts one indisputable advantage. It leads the ratings race in three key time periods: daytime, prime time, and—with the remarkable rise of David Letterman—late night. Such victories are crucial because ratings, more than any other factor, still drive advertising sales—both at the network and the station level. Because the New World stations fell short of the network's overall ratings, CBS Research Chief David F. Poltrack figures that CBS would only lose 1.5% of its national audience even if it ends up with weaker Fox stations in those markets.

STAR POWER. With the all-important ad sales season about to begin, Madison Avenue seems to be buying that line. Several media buyers say the station defections will probably hurt CBS more in the posturing that accompanies the season than in the sales themselves. "CBS is saying it will have no effect," says Gene DeWitt, head of media buyer DeWitt Media Inc. "They don't expect to make any concessions." As for the season itself, experts predict all four networks will rack up 6% to 8% rate increases over last year.

CBS also plans to put marketing muscle behind any affiliate that switches to the network. George F. Schweitzer, president of CBS Marketing, says he will roll out ad blitzes. And he plans appearances by stars from prime-time programs in local markets to remind viewers where they can find "America's Most Watched Network."

STRINGER

The Broadcast Group president has to placate current affiliates and find new ones

How long it will remain "most watched" is open to question, though. After three seasons on top, some observers say CBS is ripe to be picked off by ABC. Some of its comedies, such as *Murphy Brown*, are beginning to age, and the stalwart *60 Minutes* will be hurt by the loss of football as a lead-in. Also, the network won't have the Winter Olympics, which helped power CBS's triumph in the 1993-94 season. And its chief programmer, Jeffrey F. Sagansky, is departing. ABC, by contrast, has been building momentum with sitcoms such as *Home Improvement* and new hits such as the steamy police drama *NYPD Blue*.

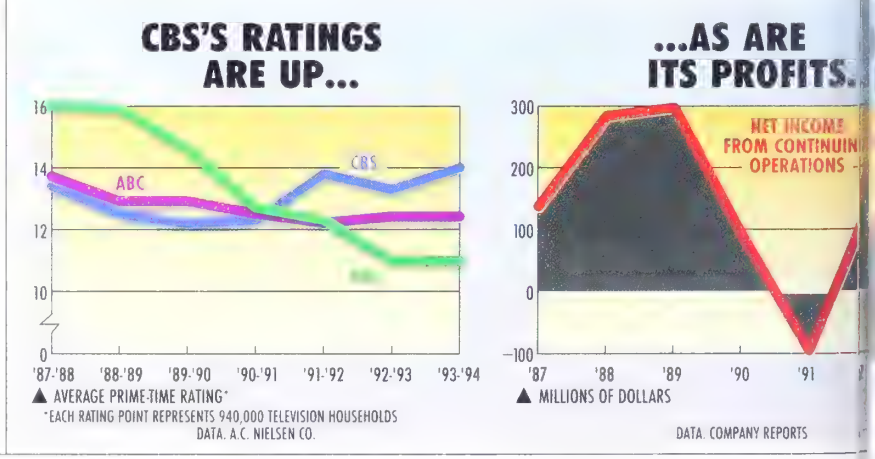
Demographics are another problem. Unlike Fox or ABC, which chase younger audiences, CBS has targeted 35-to-54-year-old viewers, which it claims are more attractive to advertisers. Some media buyers dispute that contention, but most give the network points for consistency. Now, though, some worry that CBS is blurring its image. For the upcoming season, the network is adding shows—such as a comedy, *The Boys Are Back*—that aim for younger, more urban audiences. "I always get nervous wh network says it is going to do s thing different," says Betsy Frank, d tor of TV and new media services a agency Saatchi & Saatchi Advertis Worldwide.

CBS has little to fear from NBC, w has finished in last place since the 93 season, except that NBC's streng sports highlights CBS's weakness. B says NBC Sports has assembled the lineup of the Big Three networks, pro basketball, Major League Base football, and the 1996 Olympic Ga in Atlanta. For major events, once-d inant CBS has only college basketball the 1998 Winter Olympics, which it telecast from Nagano, Japan.

If CBS Sports is lagging, CBS New limping. Poltrack acknowledges that *CBS Evening News with Dan Rathe Connie Chung* could take a dispro tionate hit from the station defecti especially if the network has to re the departed stations with former affiliates. That's because the Fox tions don't have local newscasts to b up audience interest before the nat broadcast. If, as Poltrack admits is sible, the *Evening News* loses 5% o national audience, the broadcast m no longer be competitive with AB NBC. Currently, it vies with *NBC Ni News* for second place after ABC's d nant *World News Tonight*.

NICKEL-AND-DIME. Stringer, who use be president of CBS News, admits would take a psychological toll on network, given its proud journalistic itage. "Life is tough enough with this," he says. But other CBS execute say the network may help new a ates build local news operations, w would stem the loss in audience.

As Stringer and others rally troops, some former CBS execut question how much of Tisch's cur troubles derive from his penurious s In 1987, for example, Tisch was f



NEWS DIVISION

The CBS Evening News could take a major hit from the Fox defections. If it loses 5% of its audience, it may not be competitive with NBC and ABC

a dilemma in Miami: NBC had just ped its affiliate WSVN in favor of I, anteing up $270 million for the ıger affiliate. Tisch could have cho- to bid against NBC. But instead he d to pay $59 million for a cheaper ɔendent station, WCIX. Unfortunate- ır Tisch, the owner of WSVN just ens to own CBS's affiliate in Bos- CBS executives confirm that he now switch his affiliation to Fox.

sch has alienated affiliates in other . In May, 1992, CBS tried to slash af- e compensation by $20 million— ly by charging stations for promo- l services it used to supply gratis. r the affiliates threatened to pre- ; CBS shows, the network backed Now that Tisch may have to dole nore cash to lure new stations, ex- ; affiliates wonder whether he'll try to offset that by reducing their compensation: "They've shown a tendency to take it out of our hides before," says Alan Bell, president of the broadcast arm of Freedom Communications, which owns four CBS affiliates.

Because of his nickel-and-dime attitude, Tisch probably squandered a chance to build stronger bridges to his affiliates than NBC, ABC, or Fox. After all, unlike those companies, Tisch never branched into cable networks—a competing distribution channel.

COLD CASH. That purist approach cost him dearly in negotiations with the cable industry last year. The networks had successfully lobbied the federal government to be allowed to demand payment from cable operators for the right to carry their signal. When most operators refused, ABC and NBC quickly cut deals to gain distribution for new cable networks in lieu of payment. Without cable, CBS lacked bargaining clout and Tisch came up empty-handed.

Despite everything, CBS executives stand by their broadcast-only strategy: "That's what got us to where we are," says Stringer. What's more, he believes broadcast networks—with their mass audiences and strong brand names—will remain a vital force in a media world fragmenting into niche cable networks and home-shopping services.

Tisch has similarly staunch convictions. He says Murdoch only persuaded New World to ditch CBS by offering cold cash. "Without $500 million, would anybody switch to Fox?" he asks. "Who are we kidding?" And given its cost, Tisch professes no regrets about letting Murdoch steal away football. He says several station owners have written him to say they will stick with CBS.

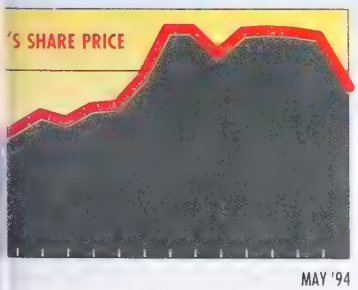
But many media observers believe change is inevitable at CBS—all the more so now that Murdoch has shuffled the cards. One rumor popping up again is that Tisch will sell the network. Certainly by shedding its music and publishing assets, Tisch has positioned CBS as a manageable acquisition for a film studio or other media company. And it's no secret that Tisch has entertained offers from prospective buyers such as Walt Disney Co. Several investment bankers say he has never gotten his price.

Now, they suggest, might be an opportune moment for suitors to try again. Government regulations, which prohibit networks from entering the syndication market, are falling away. CBS stock has dropped 12%, or $580 million, since the New World deal was announced. And outsiders wonder whether Tisch has the heart to plod through yet another period of upheaval at the network. Tisch answers the rumors with the same declaration he has used for years: "We always do what's in the best interest of our shareholders."

That's a hard position to criticize. But with the media world spinning round him, and with CBS struggling to find its place, Larry Tisch would probably best serve his shareholders if he didn't stick to the same playbook.

By Mark Landler in New York

,BUT INVESTORS ARE SKITTISH



DATA: BRIDGE INFORMATION SYSTEMS INC.

HOW RUPERT KEEPS DOING THESE DEALS

News Corp., once a debt-defying high-wire act, is flush

It always has seemed easy to dismiss Rupert Murdoch. Despite a globe-girdling array of venerable media properties—*The Times* of London, Twentieth Century Fox, *TV Guide*—the brash Australian mogul has been hard to take seriously. Perhaps it was his early years as a muck-raking publisher or, later, his assortment of unabashedly sleazy tabloids that put people off. Perhaps the world has never come to terms with Bart Simpson, animated bad boy of Murdoch's Fox television network.

As much as anything, though, Murdoch set himself apart by the way he paid for it all. This was empire-building on the edge, financial loosey-goosey in the wild and largely uncharted world of Australian accounting standards. Through the 1980s, he took on billions in debt, liberated by Australian rules that allowed him to overstate the value of his varied assets. And in 1990, it all nearly came crashing down, forcing an international consortium of lenders to restructure a kingdom on the brink of bankruptcy.

GLOBAL REACH

Vision has never been Murdoch's problem. But until recently, paying for it was

MERELY THE BEST. Now, relaxing in his sun-drenched office on a Fox studio lot that's in the middle of a $20 million renovation, Murdoch is the very picture of financial security. Signs for his new FX cable station, launched June 1, litter the lot. And his conversation is sprinkled with discussions of new satellite ventures in Europe, Latin America, and Asia. "We intend to build the best media company in the world," he says.

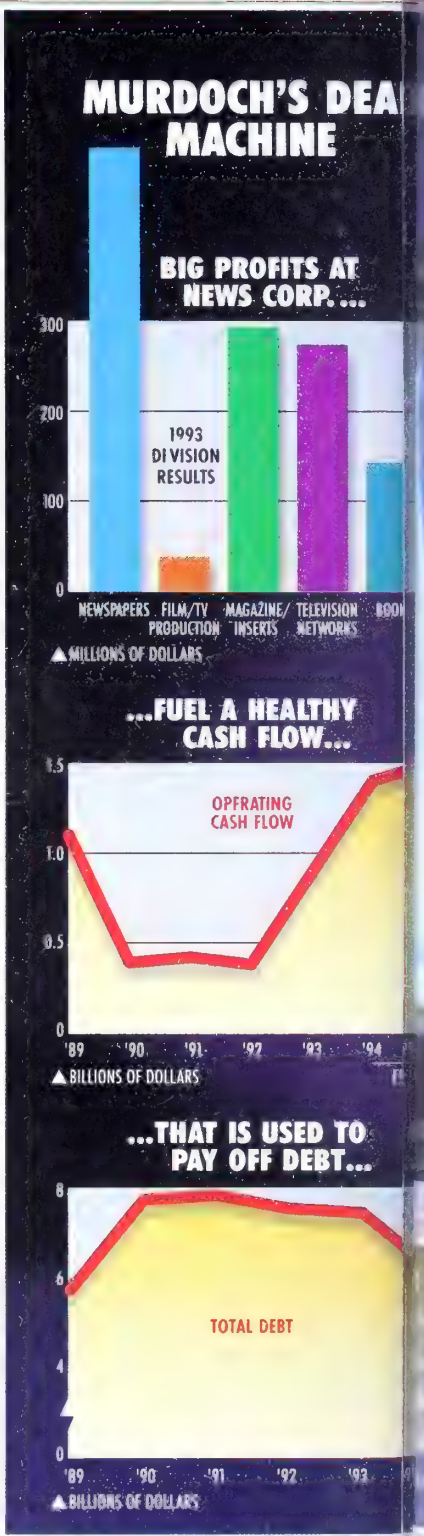
Idle braggadocio? Consider that since July, Murdoch's News Corp. has announced a staggering $3 billion worth of deals. The biggest: last December's preemptive $1.6 billion bid to bag television rights to National Football League games. The latest: his industry-jarring, $500 million strike to steal away 12 broadcast station affiliates, eight of them from network front-runner CBS Inc.

Together, those transactions have reestablished Murdoch as the media industry's preeminent swashbuckler. This was the man who bought also-ran independent television stations in the mid-'80s and acquired a broken-down movie studio just as home video and cable began thirsting for old movies and TV shows. "He's a throwback to the risk-takers of old," says former NBC Inc. Chairman Grant Tinker. "He understands that you have to spend money to make money, especially in the entertainment media."

Spending money has never been Murdoch's problem. But until recently, paying the bills was. In October, 1990, after missing a $500 million payment on his $7.6 billion in bank debt, Murdoch told News Corp.'s 146 lenders that his company would be unable to pay another $2 billion coming due in the next quarter. "We were doing so much," he says now, "and the banks were just throwing money at us." Only a series of late-night meetings, part of a rescue effort code-named Dolphin, saved the company. Murdoch agreed to sell off assets and slash debt by $2 billion.

Now, after years of lurching from one cash crisis to another, News Corp., 32.6%-owned by Murdoch and his family, is flush. Cash flow from the company's $8 billion in operating revenues more than doubled last year, to $864 million. News will comfortably produce more than $1 billion in cash this year and next, predicts Oppenheimer & Co. analyst Jessica Reif. Through two refinancings in the past 18 months, it has shaken off most of the covenants that restricted it from raising new debt. The crisis that nearly brought Murdoch down three years ago is well past.

It shows. Even as he bathed in the glow of his most recent coup, it was clear to all that Murdoch, 62, aims[t] ambitions grander than simply beat[ing] the Big Three TV networks in rati[ng] wars. He talks of creating a global [vil]lage of electronic properties that [will] beam their signal into every nook [of] the planet. Hence, the $525 million [p]aid last year for a 64% stake in Star T[V]



...WITH PLENTY LEFT FOR DEALMAKING

TAR VISION	NFL FOOTBALL	SAVOY PICTURES	NEW WORLD
93. h Pays illion for tellite half cash stock.	December, 1993. Fox commits $1.58 billion, paid from operations, for TV rights.	March, 1994. Fox puts $58 million into a joint venture with Savoy to buy TV stations.	May, 1994. Fox buys 20% of TV broadcaster/ producer for $500 million in stock.

DATA: COMPANY REPORTS, OPPENHEIMER & CO., BUSINESS WEEK

Network, a money-losing Asian ite network, and the $2 billion or he spent to launch Britain's B Television. In the U. S., Mur- is building a system that promises ng games, education, and commu- ons to computer users. He's mplating an all-news network and maybe a few more cable channels.

Then, there's Fox network. The one-time ragtag affiliation of poor, independent television stations remains the cornerstone of Murdoch's U. S. ambitions. His May 23 deal to bring on the 12 stations owned by New World Communications Group Inc. is only the first such move, says Murdoch. Within a few months he expects to add at least one, and perhaps as many as four, other CBS affiliates to the fold. He also intends to bid on other major sporting events, possibly major league baseball.

How does Murdoch intend to pay for such aggressive growth? His deals in the past year provide clues: He has used thriving projects to fund startups, taken on joint-venture partners, and offered equity in addition to or in lieu of cash. Chastened by his restructuring debacle, Murdoch is less likely these days to take on debt—and his filings these days adhere to U. S. accounting rules. "I've learned a lesson," he says. "Now, we're going to do things more conservatively." Even so, News filed a shelf registration in the U. S. late last year for $1 billion in senior subordinated debt securities. When you're Rupert Murdoch, debt is never very far away.

To win Hong Kong-based Star, Murdoch agreed to pay the family of billionaire Li Ka-shing, which owned Star, cash and stock. Still barred by covenants from taking on more debt, he unloaded his 35% interest in the *South China Morning Post* for $349 million to raise the cash portion of the deal. He issued 50 million new shares in News to the Li family for the remainder, giving them a 2.7% stake that they since have sold.

GAMESMANSHIP. The enormous NFL package won't be so complex: Murdoch will fund the contract out of operations. The price will be steep, though. On top of the $1.6 billion Fox must pay over the contract's four-year life, it will spend at least $20 million annually to produce its telecasts—including a breathtaking $8 million alone to on-air analyst and former football coach John Madden. Murdoch admits Fox stands to lose upwards of $100 million a year on the broadcasts; rival network executives put the figure at closer to $200 million.

Outrageous? Try thinking of the deal, as Murdoch does, as an enormous marketing strategy to boost his still-growing network. Football, he and industry analysts believe, will lift prime-time ratings at the eight Fox affiliates he owns—including some in such football hotbeds as Washington and New York. Higher ad sales from those stations could boost cash flow by some $40 million.

Then there's the still uncertain cachet that Fox will get from its association with America's most-watched televised sport. Analysts figure Fox, which collected $550 million last year in upfront ad sales, could add an additional $50 million or more in the upcoming ad

sales season. "If it works the way it looks like it will work, no one is going to be unhappy at all," says KMSB General Manager Ken Middleton, in Phoenix. "Look at the visibility NFL football's already given me."

Such contentment has its price: Fox's 182 affiliates will be helping to foot the bill. Affiliates say Fox no longer intends to pay them fees to compensate for a loss of viewers to the new FX channel. In addition, Fox intends to take back at least three of the 90 half-minute prime-time advertising slots it gives its affiliates throughout the week. Taken together, the moves could add $20 million a year to Murdoch's bottom line.

Does that pricey football contract sound better now? Murdoch clearly hopes it will work the same magic that soccer worked for BSkyB Television, of which News Corp. owns 50%. News lost a staggering $1.2 billion on the operation in 1989—precipitating the big restructuring. Then came its $456 million deal to telecast Premier League soccer games starting in 1992. The Brits, ever-hot for soccer and emerging from a long recession, signed on in droves. Today, BSkyB boasts 3.2 million subscribers for its six channels.

More important, the one-time weak venture has turned cash cow, funding new ideas as Murdoch begins to expand his empire once more. BSkyB's revenues are expected to grow by 57%, to $742 million this year, predicts I clays de Zoete Wedd Inc. analyst V nesh Padiachy. By 1998, revenues grow to $1.8 billion, he says. Last cember, the satellite service issued million in dividends. And this spring used its robust balance sheet to r $750 million in bank loans, which pour some $315 million into N Corp.'s war chest.

TINSELTOWN SUCCESS. Some of that help finance Fox's $500 million inv ment in New World—though most of funds will come from operating cash from selling existing Fox stations in lanta and Dallas. Murdoch is consta testing the financial waters: Last y he sought permission in Australia t

A POWER JOLT FOR STATION OWNERS

Edmund N. Ansin was mad as hell, but he doesn't have to take it anymore. Five years ago, Ansin's WSVN station in Miami was dumped by NBC Inc., which was buying the local CBS Inc. affiliate. Ansin assumed he would simply sign on with CBS, but instead, CBS spurned him and bought a weaker station on the cheap. Left out in the cold, Ansin had little choice but to sign up with Fox—then a little outfit notable mainly for its raunchiness and its poor ratings.

THE AVENGERS

Affiliates that once had to dance to the networks' music are calling the tune now

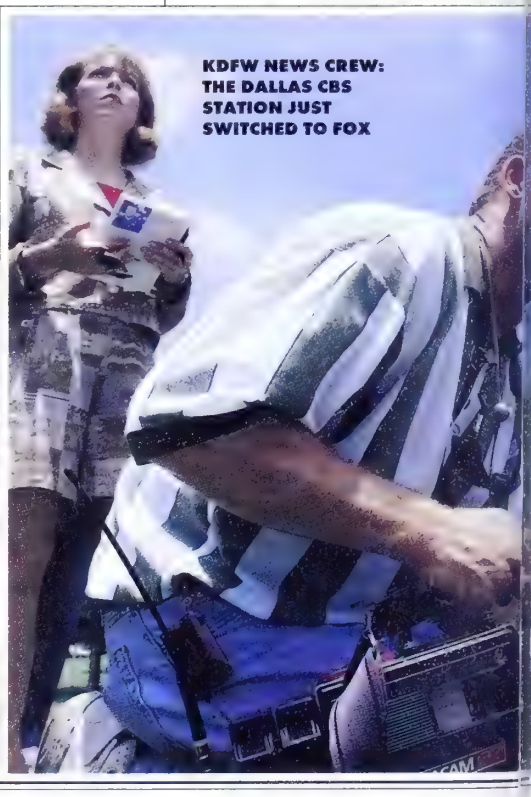
Oh, how the media world does turn. When Fox Broadcasting Co. snared 12 network affiliates on May 23 and touched off a nationwide scramble among all four networks for new stations, executives such as Ed Ansin were suddenly sitting in the catbird seat. Immediately, he and other affiliate owners began receiving humble phone calls from formerly haughty network brass—and with good reason. Ansin recently bought WHDH, the CBS affiliate in Boston. Now CBS is worried he'll take his second station to Fox, which is also courting him.

Ansin—whose Miami station earns more with Fox than it did as an NBC affiliate—is all ears. "Certainly I'm interested in hearing what any network has to say, given this turn of events," he says gleefully. "Anybody who has TV stations has to be very happy about this." Little wonder: Brian E. Cobb, a leading broker for Media Venture Partners, figures station values have climbed some 25% in recent weeks.

FATTER CHECKS. For downtrodden affiliates, the sudden shift in television's balance of power is sweet revenge. With the advent of cable, the need for their very existence was called into question. Then, cost-conscious networks, notably CBS, slashed their compensation, confident that their affiliates had no choice but to accept. Fox's emergence as a deep-pocketed suitor has changed all that. Dennis J. FitzSimons, president of Tribune Television, notes that the Fox deal made the networks realize "the importance of distribution, which is something that has been ignored recently. It shifts the leverage back to the stations." Before, adds Nicholas D. Trigony, president of Cox Enterprises Inc.'s Broadcast Div., "it was a one-sided affair in favor of the networks."

Now, a high-stakes mating ritual is under way between local TV station-owners in Boston, Buffalo, Dallas, Tampa, Phoenix, and half a dozen other cities, and CBS, NBC, ABC, and Fox. Old thinking about network loyalty and the danger of switching affiliations has flown out dow. Fox now reaches 96% of households, nearly the same lev 99% reach of the other networ instead of continuing a campaig the cash compensation they p ates—which can total about $2 r such large markets as Atlanta–h line networks have reversed cou they're more likely to promis comp checks or give affiliates m to air local ads.

All told, the increased affili pensation could cost each netw



KDFW NEWS CREW: THE DALLAS CBS STATION JUST SWITCHED TO FOX

ıonvoting common stock, to be used ıter joint ventures with technology ıanies. That didn't fly. Even so, he reasingly turning to joint ventures, as his alliance with Aussie Kerry er's Nine Network Australia Ltd. d for a satellite pay-TV license in country.

ırdoch's eye for expansion can unsettling, coming so soon after lean years. But reports from ıd the News empire indicate that of the old troubles have been thed out. The Fox film studio, h suffered through two years of uster films before last year's hit *Mrs. Doubtfire*, seems poised strong summer with the action *Speed* and *True Lies*. And after ıg the cover price of his London papers to boost circulation, his newspaper division has again become a prodigious moneymaker.

Star Television is still losing money and faces the threat of competition on several fronts, including planned new services from Ted Turner and Viacom Inc.'s MTV. Several governments, notably China's, still place restrictions on consumers' ownership of satellite dishes. Still, Murdoch is investing heavily in the network and has increased program offerings in separate deals with Indian and Chinese outfits.

The one real fly in Murdoch's ointment, in fact, is the Fox network. Despite the raid on CBS and the big football contract, the eight-year-old network still is struggling with its prime-time lineup. Except for such hot shows as *The Simpsons* and *Melrose Place*, ratings were down this year, even among its hard-core audience of young, urban viewers. Ratings did perk up during the May sweeps, but that hasn't stopped critics from sniping. "We're now in a cycle of 'look how bold Murdoch is,'" says Howard Stringer, president of CBS Broadcast Group.

Well, yes, Murdoch is bold. He knows how to spend money. He appears to have learned how to contain his passion for debt. His thirst for the deal knows no bounds. If they did not before, critics surely understand now: You dismiss Rupert Murdoch at your own peril.

By Ronald Grover in Los Angeles, with Julia Flynn in London and Mark Landler in New York

millions of dollars a year.
the frenzy: Warner Bros. Inc.
ıount Communications Inc. are
ecruiting affiliates for their own
"fifth" networks. Predicts Jack
CEO of Meredith Corp., which
television stations: "Nothing
ll at this point."

ENSE APPROACH. Much of the hift in the industry can be ck to New World Entertainef Executive William Bevins. r Turner Broadcasting System tive decided last year that he assemble a strong broadcast- to successfully build a fully l TV company that both proairs programs.

Since then, Bevins has done deals with staccato speed. First, he bought control of seven stations last year from SCI Television. Then, since Westinghouse Electric Corp. wasn't interested in selling its five blue-chip stations, he gobbled up Great American Communications' four stations. This spring, he approached DLJ Merchant Banking Partners to make an offer for four major-market TV stations that DLJ had acquired less than a year before. He didn't lowball on price, either. His first offer was so high that DLJ accepted, and the deal was closed—with no other bids—within weeks. A similarly urgent and nononsense approach surrounded Bevins' negotiations with Fox, which were concluded in about 10 days of secret talks.

One result of the deal: Any company that owns TV stations—including such large corporations as Westinghouse, Scripps Howard, Meredith, Tribune, Belo, Cox, and McGraw-Hill (publisher of BUSINESS WEEK)—is faced with critical choices. Some groups, such as Meredith, are itching to expand and buy more stations, or to shuffle existing affiliations. Tribune's eight independent stations have already signed on with the new Warner Bros. network. And Cox is committed to increasing its production activities.

BARGAINING POWER. Other affiliates face a considerable struggle to emerge from the turmoil as winners. Scripps Howard Broadcasting Co., for one, owns the Fox affiliates in Kansas City, Mo., Phoenix, and Tampa. But those are all weaker UHF stations that Fox is dumping in favor of stronger stations gained from the New World deal. Still, Scripps is not entirely on the outs. The company owns the ABC affiliates in Cleveland and Detroit—both major markets where CBS is desperate to make a deal for a new affiliate. A Scripps spokesman declined to comment on whether or not the company is talking with officials at CBS.

The networks decry the local stations' new bargaining power. "More station owners [are] in the business for short-term business gain," complains CBS Broadcast Group President Howard Stringer. But the fact is that affiliates may just now be seeing the beginning of an unexpected boom. For affiliates, these are sweet days indeed.

By Elizabeth Lesly, with Mark Landler in New York and Richard A. Melcher in Chicago

THE FALLOUT FROM FOX

Fox's move to nab 12 local affiliates from CBS and others altered the balance of power in the TV business. Here are some trends that are likely to be accelerated by the deal:

NET HOPPING

Almost overnight, the value of affiliates has risen 25%. Affiliates can now pick and choose among the four networks.

CASH FROM THE NETS

CBS, ABC, and NBC will likely beef up cash compensation packages to lure and retain their 200 or so affiliates.

LOCAL ADS

The networks may emulate Fox by giving more ad time to local stations.

AFFILIATE PROGRAMMING

Fox's lighter programming schedule means its affiliates retain more airtime, so New World Communications Group and others can develop more of their own shows.

FOX

DATA: MEDIA VENTURE PARTNERS, BUSINESS WEEK

POLITICS

THE FIRST LADY IN BOULDER: PUSHING FOR PUBLIC SUPPORT WHILE REMAINING FLEXIBLE BEHIND THE SCENES

HEALTH CARE: THE LOGJAM MAY LOOSEN

Coverage may not be "universal," but Congress fears doing nothing

It's a crisp October day. Hundreds of doctors, hospital executives, lobbyists, and staffers crowd the White House South Lawn. Members of Congress jostle for prime spots on the dais as President Clinton reaches for a stack of pens and begins signing into law the Comprehensive Health Insurance & Medical Security Act of 1994. Next to him is a beaming Hillary Rodham Clinton. Just imagining this scene brings mist to the eyes of a White House aide. "We will have an extravaganza on the South Lawn, with balloons," he muses. "We will have won."

An impossible dream? Much of Washington thinks so. Congress is weeks behind schedule on health-care legislation, public support is ebbing, and small business has all but sunk Clinton's mandate that employers pay for coverage. Meanwhile, Clinton ally and ex-House Ways & Means Committee Chairman Dan Rostenkowski (D-Ill.), has been sidelined by a May 31 corruption indictment.

But health-care reform refuses to die. Both parties fear facing voters in November's midterm elections without having passed something. The pressure to deliver is forcing Congress to float ideas that could form the basis for an eventual compromise. Just as important, the Administration is signaling flexibility to accept a deal—even if it means stretching to the limit Clinton's vow to veto any bill that doesn't guarantee coverage for every American.

The key to breaking the health-care deadlock: "triggers." To achieve universal coverage, Clinton has insisted that all employers must buy insurance for their workers within three years. The compromises being discussed in the Senate would postpone that requirement for up to five years. The bill also would require insurers to cover patients with preexisting conditions and lower premium payments for high-risk policyholders.

The big hope: to tempt individuals and employers to buy coverage voluntarily. But if the number of uninsured Americans doesn't fall below target levels within that time, the triggers would kick in, either imposing mandates automatically or forcing Congress to tackle the issue again. Price controls, too, could be put up on standby, to be triggered if reform doesn't rein in health costs.

FACE-SAVER. The trip-wire mechanisms are the brainchild of Senator John B. Breaux (D-La.). He faced intense lobbying from the White House Chief of Staff, his friend Thomas F. McLarty III, to sign on to Clinton's bill. But Breaux refused to accept Clinton's employer mandate. So Breaux developed the face-saving ploy: Clinton can claim that triggers guarantee universal coverage—eventually. And Republicans and conservative Democrats can claim that market forces will make mandates unnecessary.

The notion is gaining support. Treasury Secretary Lloyd M. Bentsen has firms that triggers "could be" the basis for a grand compromise on reform. The Senate Finance Committee Chairman Daniel P. Moynihan (D-N.Y.) is likely to include triggers in the compromise he's now drafting with Senator Bob Packwood (R-Ore.).

With the signs that Senate bipartisanship is budding, the White House is preparing to bypass the deadlocked House Energy & Commerce Committee, once Clinton's best hope for compromise, and take the issue directly to the floor. The timetable now calls for committee work to be done by July 4, with bills to be passed by the House and Senate floor by mid-August.

Meanwhile, White House officials are advancing behind-the-

HANDICAPPING HEALTH CARE

The odds on the Hill for central pieces of health-care reform

EMPLOYER MANDATE	
On all companies	6 to 1
On big companies	2 to 1
"Triggered" mandate	3 to 2
COST CONTROL	
Premium caps	9 to 1
Fee schedules	3 to 1
"Triggered" controls	even

DATA: BUSINESS WEEK

es maneuvers with a stepped-up e to bolster public support. In the four months, support for Clinton's h plan has eroded from 57% to 43%. n the Clintons return from D-Day ts in Europe on June 8, they'll be- in intensive coast-to-coast campaign ep wavering Democrats in the fold to pressure Republicans to sign on. ven with some GOP support, though, reform won't sail through Congress. A deal built around Breaux's triggers, which could leave uncovered up to 4.2 million of today's uninsured workers, will anger liberal Democrats. And even if triggers break the logjam on coverage, Congress has just 65 legislative days to deal with hundreds of details on everything from insurance reforms to subsidies for the poor.

But those hurdles can be overcome. After all, Clinton can use fear to get his way. For wavering lawmakers, he can conjure up two images: spend an October afternoon at a White House signing ceremony, or go home to face voters angry that Washington failed once more.

By Susan B. Garland, Mike McNamee, and Richard S. Dunham in Washington

Commentary/by Keith H. Hammonds

TOO MANY POLITICIANS IN HEALTH REFORM'S LAB

ll right, let's try to get this straight. Once, a few months ago, there was President Clin- 's health-care reform plan, with its ving promise of insurance coverage all and quid pro quos, among oth- , of payroll and cigarette taxes. ere were other schemes, too, intro- ed by such luminaries as Senator n H. Chafee, champion of individual ndates, and Representative Jim per, friend of small business. Sure- eform was at hand.

hose bills are history . Instead, we have five or committees, three in House and two in the ate—plus 15 or so lesser ies—all cobbling reform slation. Most are wres- g with chunks of the sident's plan, but shreds hafee and Cooper—not nention Stark, Breaux, gell, and McDermott—floating around, too.

AND PASTE. All five com- ees promise to complete by July, though it looks ady as though some 't pull that off. Then, the se's bills will go to the s Committee, where the nocratic leadership will -rig them into one pack-

The Senate's majority ler, with committee chairs, will ge its bills, then deliver the result a weeks-long floor debate. And a conference committee will meld fi- legislation from the two survivors. ith us so far? Of course you're not. one is. The legislative process on th care has been "kind of a sub- train that's hurtled into a tunnel," Michael J. Langan, a vice-presi- at benefits consultant Towers Per- "You know it's speeding along, but don't know where."

o be fair, we're starting to get hints: Switch on C-Span, and you can watch elected officials plow through entertainingly arcane legislation. (Sample: "I haven't actually read this, Mr. Chairman.") It doesn't look good. Expectations for a law that approaches the scope and impact of the President's original were scaled back long ago.

The House Ways & Means Committee leans toward basing a standard benefits package on what's now provided in Medicare—because its health subcommittee oversees Medicare. Energy & Commerce is hopelessly sidelined, because the legendary arm-twisting skills of Chairman John D. Dingell (D-Mich.) have met their match in the lobbying clout of small business. And the idea of forcing business to pay for universal coverage has moderate Democrats running for cover.

SON OF REFORM: WHAT THE HOUSE AND SENATE STITCH TOGETHER COULD BE A MONSTER

Can anyone be surprised? This is the way the conservative U. S. legislative process works. And from the start, health care has been a classic example of ego- and interest-driven politics. Its breadth, a product of Presidential ambition, ensured it would touch on nearly every lawmaker's turf. Its prominence—and the dollars at stake—guaranteed everyone would want in on the action.

BOSS KNOWS BEST. The Clinton reform plan, though Byzantine and fiscally flawed, at least was characterized by relatively consistent thinking. It reflected the goals and ideals of the boss, more or less, and—again, more or less—provided a sense of synthesis, of closure, of means and ends. Introduce the same issues into Congress, and the dynamics produce a Frankensteinesque monstrosity. "Our adversarial form of government is not well-suited to developing a tightly integrated health-care system," says Thomas O. Pyle, an early member of the President's health task force.

Where all this is headed, it now appears, is legislation proposing voluntary targets for enrollment and benefits. Missing the targets by Year X would set off triggers for mandatory programs.

In other words, Congress would get to defer responsibility but still argue that it had ensured the President's beloved universal coverage, sort of. The finances would be a lot easier to swallow. Clinton could claim victory. And everyone would pass the buck to the states and the market, which are fast overhauling health care, anyway.

Maybe that's not entirely bad. But markets don't have all the answers, and states aren't likely to address such issues as insurance reform. Congress' display of collective spinelessness may prove more than drawing-room entertainment. It may actually hurt.

Hammonds covers health care issues.

DEALS

MIGHTIER MOUSE: EURODISNEY COULD USE CASH TO BUILD RIDES AND OPEN AN MGM PARK

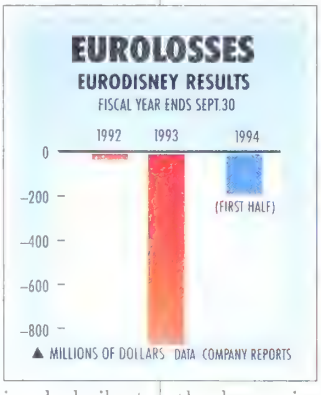
EURODISNEY'S PRINCE CHARMING?

A Saudi's equity infusion puts the park on solid ground—for a while

After a financial crunch threatened to close its doors in March, Walt Disney Co.'s struggling French theme park finally has some good news. Like Aladdin flying in on his magic carpet, Saudi Prince Al-Walid bin Talal is about to help rescue Euro Disneyland by investing up to $430 million in new equity. The deal is part of a broad restructuring that EuroDisney shareholders are to consider at a June 8 meeting. The prince also would raise $100 million to build a new conference center aimed at bringing more visitors to the troubled park.

But if the new cash helps strike a blow for American culture in the Paris suburbs, shareholders of Euro Disneyland shouldn't start the celebration yet. Many analysts doubt that even a princely bailout can turn EuroDisney into a profitable investment for outside stockholders.

SCAVENGER HUNTER. The agreement with Prince Al-Walid, announced by EuroDisney on June 1, is only a broad framework. "Lots of details remain to be worked out," says one of Disney's European bankers. The basic plan: The park's 61 lenders are obligated to buy any shares that existing shareholders don't purchase, in a $1.1 billion rights offering to be launched by fall. Al-Walid would buy out three French banks that aren't keen to own EuroDisney shares. The prince would buy shares from Banque Nationale de Paris, Banque Indosuez, and Caisse des Depots et Consignations—and possibly Disney. He would end up owning between 13% and 24% of the French venture.



The per-share price that Al-Walid and other shareholders would pay hasn't been set, but estimates range between 90¢ and $1.80 a share. That's a bargain compared with EuroDisney's recent market price of $5.33—and especially compared with its 1989 offering price of $12.80. Analysts gripe at the low price Al-Walid is getting. Still, says Nigel Reed, an analyst at Paribas Capital Markets in London, the deal "would be a positive sign that someone has confidence" in the park.

Prince Al-Walid is famous for scavenging stock in troubled companies at bargain prices. He did so at Citicorp and Saks Fifth Avenue in 1991, helping salvage both companies and profit mightily himself. The 37-year-old neph of Saudi King Fahd is a sort of one-m investment bank, who some Saudis thi is a conduit for royal family money.

After the prince's first big deal 1988 bailout of a Saudi bank, the pri put $590 million into Citibank convertib preferred in the midst of the Pers Gulf war—buying a nearly 10% piece the bank at a time when most inv tors were chary of its prospects. I profit if he were to sell out today: cl to $900 million. In the same year, Walid bought 50% of Saks Fifth A nue after a leveraged buyout. His Eu Disney deal was worked out throu Carlyle Group, a Washington investm bank run by ex-Bush Administrat officials.

WHIRLWIND TOUR. By moving to firm financial ground, EuroDisney would able to add park attractions and p sibly speed up the launch of a postpo second park nearby—an MGM studio to That would help solve a key proble low occupancy at the park's five big tels. "There aren't enough attracti to get people to spend the night," s Jeff Summers, an analyst at debt bro Klesch & Co. in London. Summers s he recently rode every EuroDisney r in just five hours. The conference cen also aims to fill hotels, especially weekdays.

Most analysts are still skeptical ab Euro Disneyland's ultimate pay though they say its restructuring put it on solid footing for at least t years. Lenders are stretching out p ments on the park's $3.4 billion de while Walt Disney—which owns 49% the park—is giving up license fees fo time. After big losses (chart), the p should make a profit in 1995 and 19 predicts Reed of Paribas. But trou could return once interest payments license fees kick in again, he says.

Disney hopes its two-year window financial peace will bring a horde of fr spending customers. With huge hoo on May 19, it inaugurated a station the park's gates for France's high-sp TGV trains. By summer's end, the tra will haul Londoners through the Chun in just three hours to shake hands w Mickey Mouse. The park needs t boost: Attendance in its second year operation, ended Apr. 12, fell 10%, 9.5 million.

Now, says Summers, Disney has fresh chance "to show that Europe re ly needs an amusement park that have cost $5 billion." Proving that take more than rubbing a magic lam

By Stewart Toy in Paris and J Rossant in Rome

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AUTOS

AND THEY'RE OFF! EUROCARS BURN RUBBER IN THE U.S.

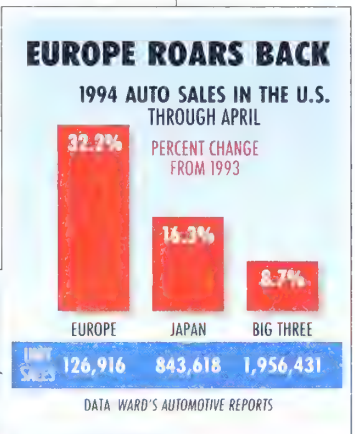
This year's pace is the hottest in a decade, thanks to a slew of new models

It's the year of the Eurocar. With cost-cutting and new models kicking in, European carmakers are off to their best year in the U. S. since a disastrous market slide began in the mid-1980s. Through April, the Europeans' U. S. car sales are up 32.2%—vs. 16.3% for Japan and 8.7% for Detroit.

It wasn't so long ago that European car companies, including Italy's Fiat and France's Renault and Peugeot, were pulling out of the U. S. Now, even Volkswagen, the only high-volume European carmaker still selling autos in America, seems finally to have arrested its slide: VW says its sales nearly doubled, to 46,300 through May. And in luxury cars, where Europeans hold about a quarter of the U. S. market, the Old World is more than holding its own. BMW's sales are now neck and neck with those of Toyota Motor Corp.'s Lexus—for the first time since 1990.

One reason the Europeans are doing so well: a plethora of new models. Mercedes-Benz, with spanking-new C-Class models to sell, is up 29.6% in 1994's first four months. And hot sales of Volvo's new 850 have helped the Swedish carmaker snare 7.8% of the luxury-car market, according to Little Falls (N. J.) consultants Jacobs & Associates—up a point from the same period last year and top among European cars. Other new Euro models include Porsche's 911, a revamped Saab 900, and Mercedes' modestly restyled, top-of-the-line S-Class cars. Coming this fall: BMW's new top-end 7 Series.

Aggressive pricing isn't hurting the Europeans, either. Although European currencies are relatively strong against the dollar, the superstrong yen puts Japanese carmakers at a disadvantage. "All of the Japanese cars are struggling because of the yen," notes Ronald D. Ertley, whose Pennsylvania dealerships sell Mercedes, Volvos, Lexuses, and Acuras. Indeed, a favorable exchange rate helped Sweden's Saab shave 3.2% off the price of its new 900S convertible and Volvo price the most popular version of its 850 at a competitive $28,010. Moreover, European carmakers, including Mercedes, say they have cut back on cut-rate lease deals.



MERCEDES COULD UNLOAD 70,000 CARS IN AMERICA THIS YEAR, 13% MORE THAN IN 1993

STAYING POWER? Thanks to cost-cutting, even Mercedes is getting into so-called value pricing. It set stickers on the C-Class in the $30,000 to $40,000 range. And the S-Class models came out in late May at $6,000 to $8,000 off the price of the cars they are replacing. Not t the cars are cheap, mind you: A 6-cy der S320 sedan starts at $65,800. company officials say they achieved ductions mainly because of a cost-c ting drive started in 1991 that sa the company $2.3 billion last year alo From now on, says Michael Basserm head of Mercedes' North American op ation, "we'll watch our costs. With competition out there, we have to."

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Still, the recent American renaissa is important to Continental carmake "The U. S. market is the yardstick company's capability as a world car p ducer," says Karl E. Ludvigsen, ch man of Ludvigsen Associates, a Lon auto consultant. That's one reason B and Mercedes are each now build their first U. S. carmaking facilities. aim: to break Europe's American j and return to the glory years of mid-1980s—when the Euros sold ab 750,000 cars in the U. S., twice w they'll sell this year if they keep their current pace. An admirable g but they have a long road to travel reach it.

By John Templeman in Bonn David Woodruff in Detroit

What you really want is the goose.

Once upon a time, you could set a ll defined goal, direct the organi- ion towards it and if all went well, p!, out came the desired result. But in this unpredictable era, what ou need to adjust the goal? What ou need two eggs? Or a dozen?

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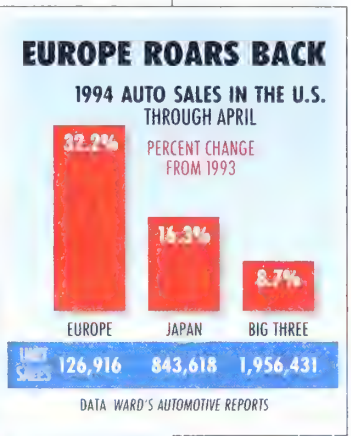
By John Templeman in Bonn and David Woodruff in Detroit

MERCEDES COULD UNLOAD 70,000 CARS IN AMERICA THIS YEAR, 13% MORE THAN IN 1993



What you really want is the goose.

Once upon a time, you could set a ll defined goal, direct the organi- ion towards it and if all went well, p!, out came the desired result. But in this unpredictable era, what ou need to adjust the goal? What ou need two eggs? Or a dozen?

Instead of a single finite outcome, we offer an approach that will keep producing. An enterprise in which all the parts function cooperatively.

So you can shift adeptly from one goal to the next. One achievement to the next. One improvement to the next. And that's not just another theory. That's our golden rule.

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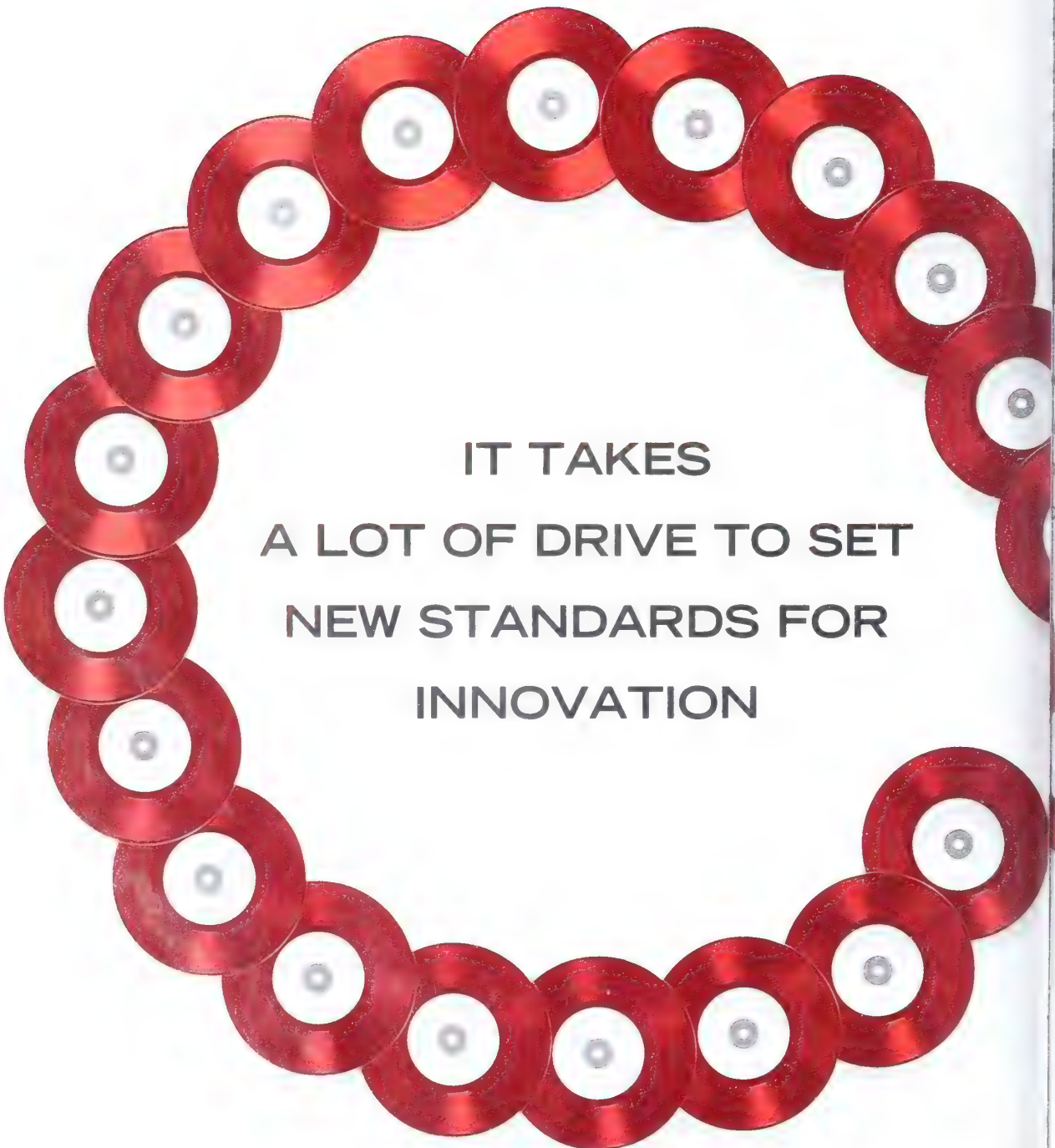
IT TAKES
A LOT OF DRIVE TO SET
NEW STANDARDS FOR
INNOVATION

The programs your personal computer runs — and the data files it generates — are gluttons for storage space. So we created a new standard in data storage: 3-1/2 inch magneto-optical disk drives with 30MB capacity that store as much as 160 conventional floppy s. It's not the first time we've established a world standard in v technology. And, with our $3 billion annual investment in R&D, we don't expect it to be the last. We helped establish the ATM standard for multimedia communications. For America's first information superhighway, we delivered all-bandwidth ATM switching systems for handling voice, data and video. And ere the first to offer a comprehensive set of ICs for ATM. Our puter breakthroughs include some of the world's fastest and allest — from supercomputers to pen-based, hand-held mobile omputers. And credit-card-sized PCMCIA devices for memory and peripherals. Like you, we've learned that today's creative environment offers two choices: lead or follow. With our drive, we're not looking back.

FUJITSU

COMPUTERS, COMMUNICATIONS, MICROELECTRONICS

INDUSTRIAL POLICY

TEACHING OLD CROPS NEW TRICKS

The Agriculture Dept. is funding companies to find nonfood uses for plants

You've got a bold plan to turn old crops into new products—say, transform wheat into plastic or lesquerella seed into nylon. At a stroke, you could cut America's dependence on foreign oil, slash government subsidies for surplus crops, and save the family farm. But financing is scarcer than lips on a chicken, since most investors don't know their jojoba from their elbow. "When you start talking agriculture, they say, 'There's the door. Don't let it hit you on the way out,'" laments Agriculture Dept. (USDA) agronomist Robert Armstrong.

Enter the USDA and its novel program to develop nonfood, nonfeed uses for farm products. Last summer, the USDA's Alternative Agricultural Research & Commercialization (AARC) center doled out some $9 million among 23 companies for projects ranging from stuffing pillows with milkweed to extracting oils and chemicals from crops (table). This year, the program will invest an additional $9 million in 20 companies, including Agriboard Industries in Fairfield, Iowa, which aims to prove that straw houses can stand up better than they do in fairy tales.

BLENDER WRECKER. This is no ordinary government handout. The AARC center is playing venture capitalist—buying stock, seeking royalties, or demanding loan repayments from profitable companies. "Taxpayers have a chance to regain their capital," says Frank Erickson, president of Seattle's International Lubricants, which processes rapeseed and other plants. In 1993, Uncle Sam paid $480,000 for 8% of the company.

To the USDA, no idea is too offbeat. Consider Phenix Composites Inc. in Mankato, Minn. Back in 1991, an enterprising 11-year-old set out to make a useful material from newspapers. She shredded them in her mother's blender (which didn't survive the experiment), added glue, and baked the slop in a microwave. The result was a material tough enough to withstand seven dishwasher cycles. It caught the eye of engineer Donald E. Anderson, a member of a local group that had been searching for a "green" product to commercialize.

The group adopted the girl's idea, substituting soybean flour for glue. Out came a material that feels like wood and looks like granite. But plans to market it for furniture and floors didn't pan out until the USDA offered a $1 million loan if the company could raise the same amount. "The stamp of approval from a prestigious body like the USDA helped us raise $4.5 million," says Vice-President Scott Taylor. On May 16, the company began full-scale production.

With USDA-backed products just reaching the market, it's too soon to assess the AARC center's business acumen. But the program's crusaders aren't focused only on the bottom line. "My dream is the rejuvenation of rural America," says board member Roger S. Porter, a polymer scientist at the University of Massachusetts at Amherst. "We could have scores of miniplants that turn wheat straw into particleboard or soybeans into diesel fuel."

For companies struggling to make this vision a reality, the program is a godsend. Thomas A. Meyer, president of Aquinas Technologies Group Inc. in St. Louis, which makes windshield-washer fluid out of ethanol from corn, figures he wouldn't have been able to launch the product without $100,000 from the AARC center. Terry Brix, president of International Polyol Chemical Inc. in Redmond, Wash., was "in a state of shock" to discover that the program existed. The USDA invested $300,000 in his company, which synthesizes such chemicals as ethylene glycol from corn.

UNLOVED, UNNOTICED. Not all is sunny in Alternative Ag-land. Backers of the program gripe that the Clinton Administration virtually ignores nonfood ag, decking instead on high-tech industries such as flat-panel displays. And they're right. "I haven't paid 10 seconds of attention to it," says a top White House technology official.

That kind of attitude frustrates USDA officials. "If we had decent support—$50 million to $100 million annually—we could make a dent in our agricultural surplus problem," says AARC center Director Paul F. O'Connell. "In four to five years, once royalties and repayments start coming in, we wouldn't need as much money."

Of course, that assumes America will have a taste for farm products that it don't eat. Will consumers read newspapers made from kenaf, a cotton-like fiber plant, sit on furniture made from newspapers, and live in houses built of straw? For now, anyway, flat-panel displays look like a safer investment.

By John Carey in Washington

LESQUERELLA: NOVEL SOURCE OF NYLON?

UNCLE SAM, VENTURE CAPITALIST

A sampling of the Agriculture Dept.'s investments in small businesses

Product	Company	USDA "investment"
Windshield-washer fluid from corn-derived ethanol	Aquinas Technologies Group (St. Louis)	$100,000 loan
Biodegradable plastic from wheat gluten	Midwest Grain Products (Atchison, Kan.)	$818,000 loan
Oil for hydraulic fluids and cosmetics from rapeseed	International Lubricants (Seattle)	$480,000 equity investment
Granite-like composite from waste newspaper and soybean flour	Phenix Composites (Mankato, Minn.)	$1,000,000 loan
Low-grade waste wool for sopping up oil spills	Hobbs Bonded Fibers (Mexia, Tex.)	$700,000 loan

DATA AGRICULTURE DEPT

TO BUILD A BETTER BRIEFCASE, WE STOPPED HALFWAY.
Samsonite® Smart™
THE SMART ATTACHÉ SERIES
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In Business This Week

EDITED BY KEITH H. HAMMONDS

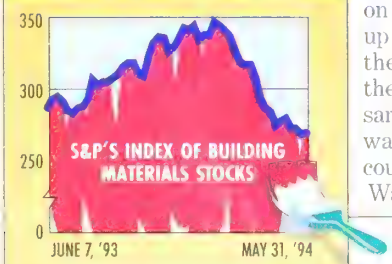
JOE CAMEL GETS TO STICK AROUND

Score one for the beleaguered tobacco industry. In a nonpublic vote on May 31, the Federal Trade Commission opted not to ban R. J. Reynolds Tobacco's controversial Joe Camel ads. Since 1991, health groups have sought to muzzle the sunglasses-wearing spokescamel, whom they viewed as a slick marketing device to hook minors on Camel cigarettes. While FTC Chairman Janet Steiger and Democratic Commissioner Dennis Yao voted for a ban, the other three members were concerned about crimping RJR's First Amendment rights, according to commission insiders. They also worried about the lack of conclusive evidence against RJR. A company spokesman, not surprisingly, says, "We're obviously pleased."

A NOSEDIVE FOR HIGHFLIER IDB

Is there a time bomb hiding on the balance sheet of IDB Communications Group? That's what Wall Street was wondering as it halved the high-flying satellite-communications company's market value on June 1. Shares closed at 7¼, down 50% from the day before, one day after IDB announced that its auditor, Deloitte & Touche, resigned because of disagreements over the company's first-quarter earnings. In April, IDB reported net income of $8.8 million on revenues of $108 million, up 68%. "We're confident that the numbers as reported for the first quarter will stay the same," says IDB President Edward Cheramy, a former accountant and partner at Price Waterhouse.

CLOSING BELL



HOUSING STOCKS GET SHELLACKED

If bond traders are nervous about higher interest rates, investors in the building-products and homebuilding industries appear downright panicky. Since early February, for example, shares of homebuilder Centex are off 48%, while insulation maker Owens-Corning Fiberglas has plummeted 30%. An overreaction? True, new-home sales were off by 6.8% in April. But most building-related companies are posting solid results, and housing starts have yet to show any real weakness. Even with the Fed's moves, points out Merrill Lynch analyst Jonathan Goldfarb, mortgage rates remain lower than in 1985, when new housing was a good bit stronger.

DATA: BRIDGE INFORMATION SYSTEMS INC.

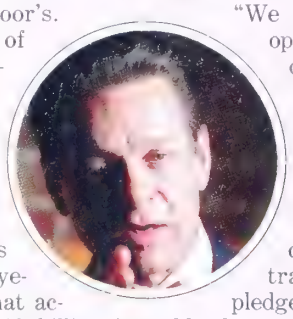
RIVERS SHOULD BE PRETTY, TOO

The Supreme Court handed environmentalists a big victory on May 31, upholding a broad reading of the Clean Water Act. Siding with the state of Washington in a case brought by Tacoma and its local utility district, the justices decided that the law allows states to impose safeguards for recreation, aesthetic enjoyment, and other uses of waterways—in addition to regulating pollution. Environmentalists say the 230 dams coming up for federal relicensing may be subject to more conditions in the wake of the decision. And the Edison Electric Institute argues that the new hurdles may reduce hydroelectric capacity, which it says represents about 95% of the nation's renewable energy resources.

HEADLINER

CLEAR THE DEC

It's sail-trimming time for Digital Equipment CEO Robert Palmer. The troubled computer maker has lost $4 billion since 1991, and its debt ratings are under review by Standard & Poor's. Now, as part of yet another restructuring to be unveiled by mid-July, Palmer must divest some major businesses. Former executives say suitors are eyeing operations that account for about $3 billion in revenues—among them Digital's management consulting and systems integration, disk storage, and software units.



To accelerate those sales, Palmer named Controller Vincent Mullarkey Jr. as his new chief financial officer, rep[illegible]ing William Steul, who [illegible]signed on May 26. Insid[illegible] say Steul had argued fo[illegible] more deliberate approach [illegible] asset sales. Not Mullark[illegible] "We have signific[illegible] opportunity to r[illegible] cash in the as[illegible] of the compa[illegible] he says. As [illegible]troller, the [illegible]key, 46-year [illegible] executive [illegible] the brakes [illegible] company-p[illegible] travel. Now [illegible] pledges to slash rec[illegible]ables by a quarter. Good i[illegible] Analysts expect DEC will h[illegible] to take $1 billion in new [illegible]structuring charges this q[illegible]ter—enough to exhaust [illegible] current $930 million c[illegible] cushion.

By Gary McWilli[illegible]

CAN CLINTON CALL IN BEIJING'S NOTES?

Administration officials expect a prompt foreign policy payback from China for President Clinton's renewal of most-favored-nation (MFN) trade status for the Middle Kingdom. China has long opposed the idea of U. N. Security Council sanctions on North Korea for barring international inspection of its nuclear facilities. But now, after Clinton's U-turn on MFN, China isn't likely to block sanctions if the U. S. presses for them. "We've done everything we can to pave the way for at least an abstention" by China on a sanctions vote, a senior Administration official says.

BANKING REFORM GETS PUSHED BACK

Interstate banking legislation has stalled out. Backers of the bill, which would allow banks to operate across s[illegible] lines without setting up se[illegible]ate holding companies, [illegible] claimed it would be a d[illegible] deal by Memorial Day. [illegible] there have yet to be [illegible] meetings between House [illegible] Senate staffers to iron out [illegible]ferences in their version[illegible] the bill. Hill sources say [illegible] loss of momentum is [illegible] largely to Senate Bank[illegible] Chairman Donald Riegle's [illegible] Mich.) determination to p[illegible] through pending commun[illegible] development legislation be[illegible] he turns to the interstate [illegible]

ET CETERA . . .

- Big Kmart investors [illegible] they would oppose a plan [illegible] spin off specialty units.
- Fleming paid $1.1 billion [illegible] Scrivner, creating the bigg[illegible] U. S. food distributor.
- Yabba-dabba-doo! *The F[illegible]stones* grossed $37.5 millio[illegible] its first weekend in cinem[illegible]
- Sega, with IBM and Bl[illegible]buster, will test electronic [illegible]livery of video games.

EDITED BY OWEN ULLMANN

WHY CLINTON CAN'T KEEP HIS EYES OFF CALIFORNIA

The Republican incumbent, a Yale-educated centrist who plays the role of right-winger, seems tired and out of touch. To deflect attention from a sick economy, he its his Democratic opponent for coddling criminals and ring out of the mainstream on social issues. Undeterred, his iny foe chants the anthem of "change," touts a detailed nomic-recovery plan, and tours the hustings by bus.

, flashback to the 1992 contest between George Bush and Clinton? No, California, 1994. In a race as noteworthy for national implications as its lack of originality, Governor Pete Wilson, 60, is battling State asurer Kathleen Brown, 48, heiress to a nocratic political dynasty. So far, youth and risma are beating GOP attempts to resurrect ghost of Willie Horton. Brown holds a 10- t lead in the polls. Assuming each combatant ls off primary foes on June 7, the stage will set for the year's pivotal political duel.

E STAKES. Both political parties have much at e in the great California shoot-out. Demo- s, who have lost every major congressional tion since President Clinton took office, des- ately need a win to counter the impression Clinton is a drag on the ticket.

fter 12 Presidential visits, creation of a spe- White House office catering to California, the infusion of $10 billion of disaster aid into the Not-So- len State, a Brown loss would be a personal rebuff to Clin- And California's 54 electoral votes loom large in the sident's own reelection strategy. Without a Democrat in amento to organize get-out-the-vote drives, the state d slip away in '96. Indeed, the popularity Clinton enjoyed years ago has faded. Only 38% of state voters now ap- e of his job performance.

epublicans see other portents. A Wilson victory would sform the battered pol into this year's "Comeback Kid." e California has moved its June Presidential primary up to March, the acclaim and fund-raising base could make Wilson an instant '96 contender.

WILSON TRAILS BY 10 POINTS IN THE POLLS

In the short run, the GOP views California as a giant missile range for testing explosive midterm election themes. With the national economy a non-issue, Republican candidates are assailing Democratic permissiveness on crime and immigration. California's defense-dependent economy remains in the tank. But thanks to Wilson's social-issues blitz—his ads pound Brown for opposing the death penalty and letting illegal aliens bankrupt the state—political pros expect a close race.

Wilson boasts of leading the push for a "three strikes and you're out" sentencing law. He is also battling the feds for $3.1 billion in expenses stemming from lax border-control policies and backing a ballot proposal that would bar children of illegal immigrants from state schools and clinics. "I'm dealing with real issues that are understandably stirring voters' emotions because they're outraged," Wilson says. Replies Brown: "I'm running a campaign of change and hope. He's running a mean-spirited campaign of darkness. The question I ask voters is, 'Do you feel safer than you did four years ago?' "

Brown's anticrime plank includes mandatory sentencing laws and boot camps for first offenders, and she vows to crack down on the hiring of illegals. She's also promoting a modest economic blueprint (regulatory reform, no new taxes) in hopes of drawing business support. But it will take more than that to beat Wilson. Says one aide: "If the election is about crime, we lose. We have to focus on Wilson's miserable economic performance."

Can Brown make the Clinton script work again in a far different, far surlier California? National Democrats in need of a lift sure hope so. And no one's hoping more than Bill Clinton, whose political fortunes are tied closely to a revival of the California Dream.

By Lee Walczak in Sacramento

ITAL WRAPUP

MINATIONS

epublicans hope to stir up new trouble for Lauri Fitz-Pegado, ninee to head the U. S. Foreign & mmercial Service. Fitz-Pegado is a nd and business associate of Com- rce Secretary Ronald H. Brown. e former Hill & Knowlton Inc. ex- tive's nomination has languished for nths because she once lobbied for tators in Haiti and Angola and was used by opponents of misleading ngress before the gulf war, when orchestrated uncorroborated tes- ony about alleged Iraqi atrocities. z-Pegado insists she misled no one. Now, Senator Lauch Faircloth (R-N. C.) is poking into the departure of Fitz-Pegado's husband, Fernando Pegado, from Angola's state oil company, Sonangol, during a 1987 scandal involving up to $60 million in allegedly misspent funds. Pegado was director of the company's London office. While he was named in a lawsuit brought by Sonangol, the complaint was later abandoned and he was not a party to the final settlement. The court action also bars future claims against him. In 1988 he married Lauri Fitz and moved to the U. S. He currently is an energy consultant. Some Senate Democrats have urged withdrawal of the nomination, but Brown is insistent. He hopes for a Senate vote in June.

REGULATIONS

Shippers say the U. S. Coast Guard will force them to end shipments of imported oil to the U. S. if the Administration enforces a law boosting vessel owners' liabilities for oil spills and requiring shippers to carry insurance cards to prove they have coverage. The Office of Management & Budget is expected soon to let the Coast Guard issue the regs under the Oil Pollution Act of 1990, passed after the Exxon Valdez spill. But to kill—or soften—the rules, shippers say they won't provide the data needed to complete the permits. The Coast Guard would ban undocumented tankers from U. S. waters.

CHINA'S GATES SWING OPEN

U.S. COMPANIES MAY WELL BECOME KEY PARTNERS

No sooner did President Clinton announce renewal of China's most-favored-nation (MFN) trade status on May 26 than a team of five Chinese auto experts flew off to Detroit. Their mission: to review Chrysler Corp.'s plants before deciding whether to select Chrysler or Mercedes-Benz to build and run a $1.2 billion minivan plant in Guangdong province. The MFN news certainly didn't hurt Chrysler's chances. "We hope Chrysler will win the bidding," says a knowledgeable Guangdong business executive.

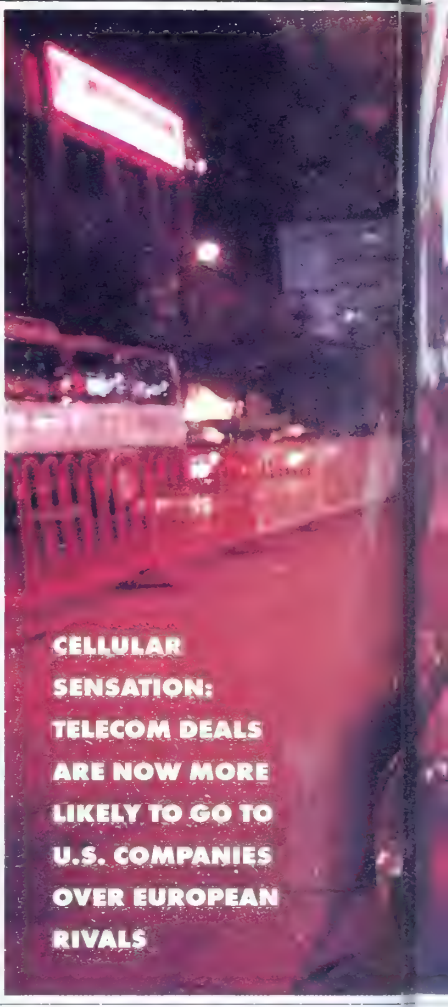
A breakthrough for Chrysler would be another sign of a new era in U.S.-China business relations. Clinton's decision to decouple China's trade status from its human rights record is likely to give U.S. companies a shot at becoming major players in key Chinese industries from aerospace to computers to telecommunications. And as American giants win deals that will help reshape the Chinese economy, hundreds of smaller companies will ride their coattails (table). As a result of the new economic entente, European and Japanese companies are likely to feel intensified competition from U.S. companies.

A boomlet of deals emerged even before Clinton's announcement, as it became apparent that the President would eliminate the biggest source of animosity between Washington and Beijing. Caterpillar Inc. recently unveiled a joint venture to build hydraulic excavators in China, where Caterpillar expects the market to be worth $2 billion by the year 2000. On May 26, reports surfaced that Boeing Co. would win a $5 billion order from Chinese airlines. A Boeing spokesman says discussions are under way.

Then, on June 1, Apple Computer Inc. announced plans to begin production of components in China, part of an effort to grab 20% of the Chinese PC market. Apple is trying to catch up with IBM, which last month signed a memorandum of understanding with China to design and install information-technology networks.

HIGH-TECH SURGE. U.S. officials insist the President's MFN decision was not driven by the prospect that China would cut sweet deals with Corporate America. And, indeed, some deals the Chinese have proffered could fall through now that MFN is in the bag. But with bilateral relations on a firmer footing, the Clintonites believe the Chinese will start paying much closer attention to U.S. companies. "Other things being equal, they might tip some business our way," says one senior Administration official. To help make sure they do, Commerce Secretary Ronald H. Brown will lead a delegation of American chief executives to China in August.

Critical as it is, the lifting of the MFN cloud isn't the only reason that China watchers expect a burst of commercial transactions over the next few years.



CELLULAR SENSATION: TELECOM DEALS ARE NOW MORE LIKELY TO GO TO U.S. COMPANIES OVER EUROPEAN RIVALS

The Clinton Administration has pe-
tioned the U.S. for an export surge
ending curbs on high-technology sale
China. As a result, U.S. capital-go
exports to China, now worth about
billion, are likely to increase by m
than 100% within five years, says Ni
olas R. Lardy, a China expert at
University of Washington.

Such predictions would have be
moot had Clinton placed stiff sanctio
on China. U.S. bidders on projects
quiring Beijing's approval would th
have been targets of retaliation. De
sions on some of those transactions
been on hold. Now, says Philip Car
chael, president of the American Ch

CORPORATE AMERICA'S CHINA BONANZA

The end of the link between human rights and China's most-favored-nation trade status will help U.S. companies move into the driver's seat in many key industries.

TELECOM

Motorola is rapidly expanding its semiconductor and pager operations in China. AT&T is negotiating a deal to begin the massive job of rewiring China's obsolete telecom network.

AUTOS

The MFN announcement removes the chief obstacle to Chrysler winning a coveted $1.2 billion minivan production deal, the first of its kind in China.

COMPU

IBM is poi
design an
technology networks th
out the country. Apple
begin manufacturing in
with hopes of winning
the PC market.

of Commerce in Beijing, "there will n upward swing."

or the vast majority of U. S. compadelinking MFN from human rights ly levels the playing field. AT&T is a e example. In the next six years, a plans to spend $41.4 billion on ommunications, and AT&T is comg fiercely with European and Japagiants for several contracts worth nillion to $100 million from individuovinces and local authorities. Since year, AT&T has secured more than million in contracts. Rivals, howevlid not lose a chance to play the card against AT&T. "By removing ncertainty, it strengthens our position," says William J. Warwick, CEO of AT&T China.

Now, other foreign investors in China may also be encouraged to buy more American goods. Some Hong Kong property developers involved in major construction projects in China had been reluctant to buy products such as Caterpillar earthmovers for fear of Chinese retaliation if MFN were revoked. "There was a subtle resistance to having a long-term supplier relationship with the U. S. firms," says one U. S. official in Hong Kong. "That's going to disappear."

A surge in U. S. investment in China is also likely. Last year, U. S. companies signed investment contracts worth $6.8 billion, more than in the previous 13 years combined. But investment slowed as the MFN decision neared. U. S. corporations can now plunge ahead without worrying about a trade war. In late May, glass-fiber maker Owens-Corning Fiberglas Corp. announced plans to spend $150 million on 10 plants in China. On May 28, Kentucky Fried Chicken opened a fast-food restaurant in Shanghai, its 28th in China, and said it would pour $200 million into 200 outlets by 1998.

MIXED REVIEWS. Clinton's MFN decision is equally good news for dozens of small and midsize companies that ride the coattails of American multinationals. For example, Oak Tree Packaging Corp., a $42 million company in Montvale, N. J., plans three factories in China to make packaging for Nike shoes, Gillette razor blades, and Bristol-Myers Squibb aspirin. "The more that multinationals move in," says Robert J. Chandler, Oak Tree president and CEO, "the more need there will be for support functions that are not there now." Platinum Technology Inc., a $62 million Oak Brook (Ill.) software company, has now moved China to the top of its priority list. "With the prospect that more large U. S. companies will enter China, the market will open more rapidly for us," says Michael Cullinane, executive vice-president.

As relieved as U. S. executives are about Clinton's China-policy U-turn, the President's decision is playing to mixed reviews abroad. Asian governments, which take a dim view of linking human rights and trade, are pleased. But some European aircraft executives worry that a grateful China may reward Clinton by doling out orders to Boeing and McDonnell Douglas Corp. And given China's $23 billion trade surplus with the U. S., "we expect to see the American manufacturers apply pressure," says one European aircraft source. After years of battles over MFN, Americans may finally have the edge in the world's biggest market.

By Amy Borrus in Washington and Joyce Barnathan in Hong Kong, with Bruce Einhorn in New York and Stewart Toy in Paris

AEROSPACE

Boeing and McDonnell stand to gain l billions of dollars rders from Chinese Many would have Airbus had MFN not ewed.

SMALLER COMPANIES

The success of American multinationals in China is likely to create a coattail effect for many smaller companies that had been wary about the risky Chinese market.

DATA: BUSINESS WEEK

KFC PLANS TO OPEN 200 MORE OUTLETS BY 1998

RUSSIA

USING THE SOFT SELL AT THE VLADIMIR ARMS SHOW

'LISTEN—TAKE 20 MiGs AND I'LL THROW IN SOME AKs'

With business slumping, Russian arms dealers are prowling the globe

It seemed like a Hollywood farce about the arms business. First, a leggy brunette modeled an assortment of machine guns. Then, muscular special-forces troops in battle dress ran about the exhibit hall firing pistols loaded with blanks. Later, buses took guests to a nearby army combat range where they got to fire machine pistols with silencers, Dragunov sniper rifles, and other high-tech weaponry.

The Russian defense Establishment can be forgiven if the five-day show at Vladimir, 250 km east of Moscow, seemed a little over the top. The late-May affair was one of the first arms bazaars on Russian soil, and it indicates just how desperate the Russians are to boost sales. Not long ago, they were the world's largest weapons exporters. But now, with the cold war over, business is slumping badly (chart). Unless orders perk up, the industry faces big layoffs and the loss of its technological edge.

STINGER MISSILES. So Russia's arms dealers are on the march. They're looking for hard-currency sales in new markets, from Southeast Asia to Latin America. In a break from the past, they are offering some of their most modern weapons systems, including MiG-29 and Sukhoi-27 fighters, Kaman-50 attack helicopters, and the shoulder-launched Igla, Russia's answer to the U. S.-made Stinger antiaircraft missile.

The sales effort is led by Rosvoorzhennie, the state-owned arms-export company, though Russia's arms makers are free to market their wares independently. They still need government approval on sales, however.

As part of the sales blitz, the industry has launched a slick new magazine, *Military Parade*. One recent article featured a machine gun that shoots underwater. The idea for the magazine came from a U. S. citizen, Victor Bondarenko, who emigrated from Russia in 1978 and returned in the late 1980s to sell stretch limousines. Bondarenko says pushing weapons sales is a natural moneymaker since up to 80% of the economy is military-related.

Still, Russia's death merchants have to overcome some big problems. The most troubling is the dismal showing of Soviet-made arms in the hands of Saddam Hussein's troops during the Persian Gulf war. Potential clients also worry that if they buy a weapon now, the Russian maker won't be around to provide support and ammunition later. "Without logistics and backups, no weapons system is of any use," says Christopher F. Foss, military technology editor of *Jane's Defense Weekly* in London.

Another problem is that many of Russia's traditional clients—such as Angola, Cuba, and Syria—are now deadbeats or broke. Altogether, unpaid weapons bills are an important part of the $120 billion that other countries owe Russia, according to Keith Bush, director of Radio Liberty Research in Munich. By contrast, Russia owes Western bankers $85 billion. Other longtime clients, including Iraq and Libya, are off-limits because of U. N. embargoes.

BLACK MARKET. The Russians are having some success elsewhere. They have sold scores of Sukhoi-27 fighters to China, and they may let Beijing produce them under license. Iran has also been a big customer for fighters, tanks, and other weapons. Malaysia plans to buy MiG-29s. Abu Dhabi has bought BMT-3 infantry combat vehicles, and Kuwait is considering the Smerch multiple-launch rocket system.

The Russians also see a growing market in Latin America. Former Chilean dictator and now defense chief Augusto Pinochet will soon visit Moscow for talks on arms buys. But, says Richard F. Grimmett, a defense specialist with the Congressional Research Service, "there are very few clients with cash that will buy Soviet systems." And the Russians are hardly in a position to offer easy credit.

A lot of Russian weapons seem to be getting out despite bans. Russia appears to be a main supplier to the Bosnian Serbs, for instance. The black-market arms business is thriving. Gangsters have seized large model tanks, and the Russian navy has been forced to place mines around arms depots in the Far East. But none of this is of much help to the foundering mainstream weapons industry. Unless it can sign up some major new clients, much of the industry will wind up on history's ash heap.

By Peter Galuszka in Vladi

EDITED BY STANLEY REED

AN HIGH-TECH GIZMOS ELIVER A CLEAN VOTE IN MEXICO?

olitical analyst Adrián Lajous recalls his first voting experience in 1940 with a mixture of amusement and dismay: "I was a year short of legal age, but there no official voter registration list, so I walked around ico City and voted eight times. It was utter chaos, and rally the official party won through outright fraud."

hat was then. This year's Aug. 21 presidential election will astly different—at least on the surface. The government of ident Carlos Salinas de Gortari is spending nearly $1 n on high-tech gizmos that promise to deliver a clean . Tamper-proof photo-identification r-registration cards produced by roid de México have been issued 4 million Mexicans on a list com- l with the assistance of IBM de ico.

fficials have also devised a quick- t vote-tallying system, using 6,600 lheld, point-of-sale computer ter- ls to send preliminary results the country's 300 voting districts lexico City. Thus, they hope to d a repeat of the 1988 election, n a seat-of-the-pants early result em helped fuel suspicion of fraud.

THE PRESIDENTIAL DEBATE GAVE THE PAN A BOOST

-HEARTED. This is all part of a huge, hasty effort by Sali- to convince his North American Free Trade Agreement ners and an electorate made even more skeptical by the ssination of presidential candidate Luis Donaldo Colosio the vote will be free and fair.

it political analysts and opposition party members say the rnment's eleventh-hour conversion to fair elections is nearted. "They haven't become instant converts to democ- " says Lorenzo Meyer, a political scientist at Colegio de co. They just want to avoid a fiasco "that could unravel stor confidence."

deed, only when guerrilla warfare broke out in Chiapas in January did officials realize that more substantive progress toward democracy had to be made. Recent reforms, approved in May, create a new civilian-dominated, supposedly neutral body governing the Federal Electoral Institute, which oversees elections. New rules also mete out jail terms for funneling government funds to parties, and other election crimes.

However, it will be tough to enforce these rules—especially in backward rural areas, where local political chieftains can intimidate voters. Although ballot boxes will for the first time have small screens, voters may still not feel their choices are private. The PRI will also likely use its sizable financial resources to dominate the media.

SURPRISES? Still, Mexicans are getting excited as they realize that these elections could be the most open ever held. In May, the presidential candidates from the three leading parties participated in the first ever debate, which was broadcast on TV and radio. The surprise "winner" was Diego Fernandez de Cevallos of the National Action Party (PAN), whose bold debating style catapulted him from third place to a leading position in some polls. The "loser" was left-leaning Cuauhtémoc Cárdenas of the PRD, who came close to winning the 1988 election against Salinas. While the PRI candidate, Ernesto Zedillo Ponce de León, didn't "win" the debate, he did gain plaudits for suggesting it.

There could be other surprises in the coming months—perhaps in a follow-up debate. For the first time, there is a possibility the PRI could lose a national election. That chance, though, is slight. The party is very powerful, with all the advantages of incumbency. Unless the opposition makes huge strides, the PRI is likely to win even a largely clean election, with voters choosing a familiar face over the unknown.

By Geri Smith in Mexico City

BAL WRAPUP

WAFFLING BELGIANS

ne arrest of Didier Pineau-Valen- ienne, chairman of France's Groupe neider in Brussels in late May, sent ck waves through the Continent's rdrooms. It also inflamed Belgians' p-seated Francophobia. But it looks f there's more to the French execu- 's month-long jail stay than Belgian e. On the same day, Italian finan- Valentino Foti was also arrested in ssels on similar charges of fraud, ery, embezzlement, and violation of unting rules.

s chairman of Schneider—a $9.8 bil- supplier of electrical equipment e partly owned by the Belgian Empain family—Pineau-Valencienne is also accused of lowballing the value of minority shares in two Belgian affiliates he sought to make wholly owned units in a 1992 reorganization. Pineau-Valencienne earned the nickname "Dr. Attila" in the 1980s for his ruthless restructuring of Schneider. To Belgians, this sounds like another replay of another French invasion, the 1992 buyout of Belgium's Wagon-Lits by Accor, the French travel group, which was ordered by a Belgian court to up its initial, inadequate offer to minority shareholders. Belgium's hard-nosed treatment of a blue-chip executive could signal a tough new stance in Europe against questionable financial dealings.

PRODI'S PROBLEMS

Romano Prodi, chairman of Italy's state-owned IRI, offered his resignation in late May in the face of a $6.4 billion loss, much larger than anticipated. The company continues to wallow in debt, as high as $47 billion, with major losses in its steel and construction units.

The former professor has also clashed with the government of Silvio Berlusconi. Presiding over the privatization of state-run banks, he charged that the Milan-based bank, Mediobanca, which took control of two of the largest banking groups on the block, had gathered too much power. Mediobanca also handles Berlusconi's vast business dealings.

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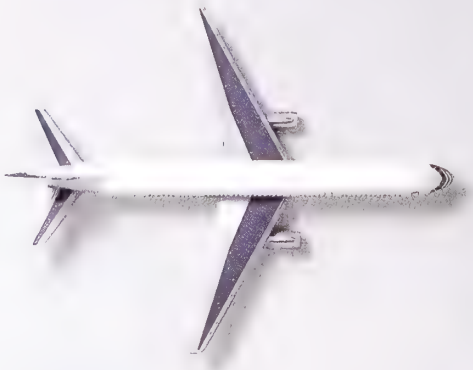

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POLICY

REFORMING WELFARE

CAN THE SYSTEM BE SALVAGED?

Tom DeLay and Yasmeen Nixon don't exactly travel in the same Washington circles. DeLay, 47, is a fire-breathing conservative congressman from Houston. Yasmeen, 20, is a single mother in her junior year of high school, struggling to raise her two-year-old daughter, Rashima.

But on this, the middle-aged congressman and the young welfare mother can agree: The system that supplies Yasmeen with $330 a month in cash and $206 in food stamps is a mess. In DeLay's view, welfare is predicated on the "simple condition that recipients promise not to work and not to marry."

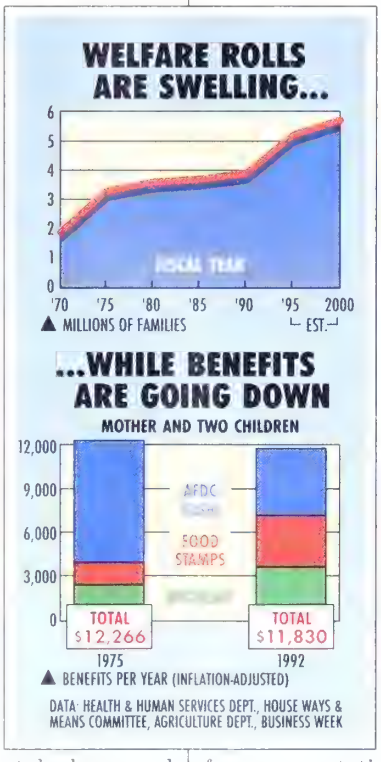
Exactly, says Yasmeen. When she took a government-subsidized, minimum-wage job last summer, she nearly went under. Her food-stamp allotment was cut to $143 a month, $700 of her wages was subtracted from subsequent cash stipends, and the payments were delayed by paperwork—all because she began working. She fell behind on the rent, and had her telephone and electricity cut off. The experience convinced Yasmeen that the odds are against her getting off welfare, even in a make-work job. "I'd like to go to work, but not for $330 a month," she says.

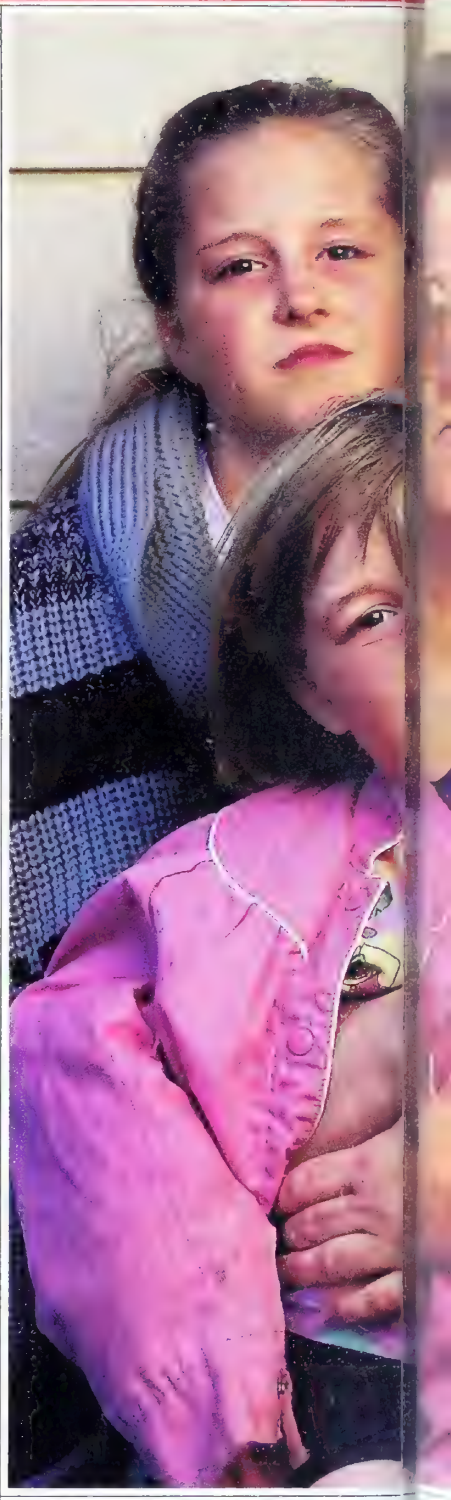
When people as different as Yasmeen Nixon and Tom DeLay agree that welfare is a self-defeating trap, can real reform be far behind? In Washington, the consensus that the 59-year-old system is broken runs from black conservatives to white liberals, from Democrats to Republicans. Beyond, states are jumping in. From Washington to Wisconsin, Maryland to Massachusetts, they're experimenting with alternatives. "Distrust and anger with the current system unite the entire country," says David T. Ellwood, one of the Administration's top reform architects at the Health & Human Services Dept.

To seize the opportunity, President Clinton is sending Congress a sweeping reform proposal that is intended to transform the government's welfare check-writing machine into a job-training and work-placement system. At the center of the reform is a two-year time limit on Aid to Families with Dependent Children (AFDC). Instead of languishing on the dole, nearly all welfare recipients would be moved from dependence to the workplace within two years. "We can't have fewer expectations of welfare mothers than women in the workforce," says Health & Human Services Secretary Donna E. Shalala. "Girls shouldn't think they don't need to get up and go to work in the morning."

But Clinton isn't the only one seeking to leverage the suddenly potent issue. House Republicans, led by DeLay, are pushing their own bill. Moderate Democrats have theirs. The Congressional Black Caucus is readying a set of "non-negotiable demands." And liberals are warning that by punishing welfare mothers, Clinton will just hurt children—who are two-thirds of the recipients.

The two competing bills already in Congress share specific solutions, such as providing job training and child care. The Republicans, though, favor a more





INCHING INTO INDEPENDENCE
Thanks to Denver's training and child-care program, welfare mother Cynthia Hayes managed to find a $7-an-hour job

ive approach to moving mothers
ıe dole: imposing tougher sanctions
hose who refuse education, job
ing, or job placement. But the big
cal clash will come over how to fi-
e reform. "The dirty little secret
elfare reform is that politicians say
can save money, but that's balo-
says Larry Jackson, Virginia's
nissioner of Social Services.

But there are economic incentives for redesigning welfare. Too often, welfare wastes tax dollars on a system that does little more than maintain families at subsistence levels. The cost to business of such wasted potential is high, resulting in a dearth of qualified applicants for even low-skilled jobs such as running a cash register. Many employers find that they must train entry-level workers before acquiring even the rudimentary skills of the workplace. This is one area where the U.S. lags behind its major trading partners. "The bottom half of our workforce can't compete with the bottom half of theirs," laments Massachusetts Institute of Technology economist Lester C. Thurow.

Welfare dependency contributes to crime and illegitimacy as well. Welfare has become a sinkhole for young women, and, for men, a safety net that cares for the babies that they make but abandon with impunity. A shocking number of today's inner-city population is growing up without fathers, without their incomes, and without the stability of a two-parent family. Since 1960, the percentage of children living in single-parent homes has soared from 9% to 27%. Meanwhile, the number of children living in poverty has nearly doubled, to 22%. Most of this is attributable to an explosion of out-of-wedlock births.

"DESTRUCTIVE FORCE." The result is a downward economic spiral. Today, the chances of a child growing up to be dependent on welfare is four times greater if that child is born into welfare. "Welfare is a modern-day form of what I call slavery," says New Jersey lawmaker Wayne R. Bryant, a black Democrat from Camden who helped write that state's tough reform law. "It is a destructive force for low-income families."

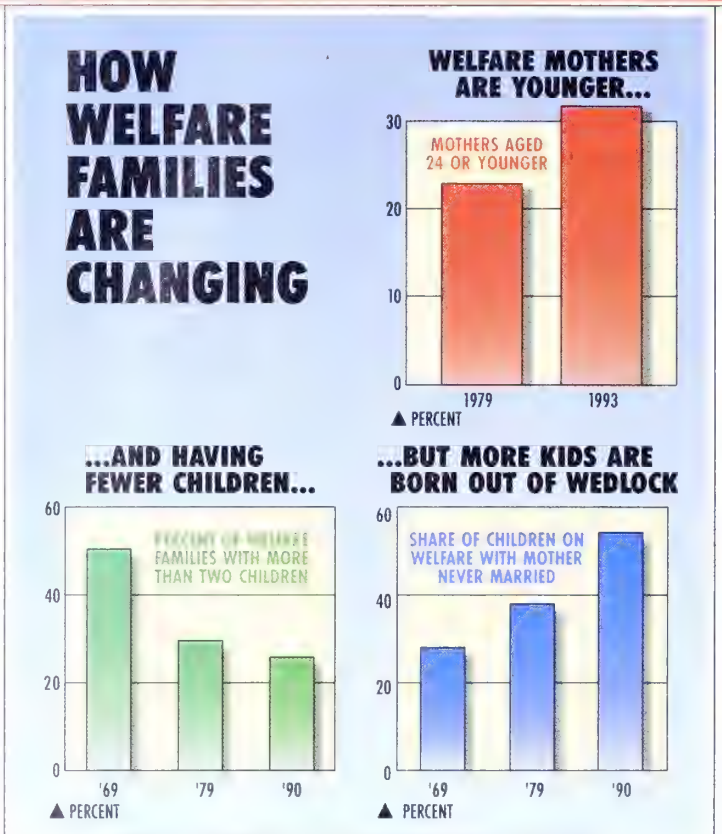
Certainly, recipients aren't getting rich from the hodgepodge of programs that make up welfare—AFDC, Medicaid, food stamps, free school meals, housing subsidies, and utility assistance. Welfare benefits haven't even kept up with inflation (chart). And in no state does the maximum AFDC benefit raise a family of any size above the poverty line. AFDC spending has actually declined from 1.5% of the federal budget in 1975 to 1%.

Despite ambitious campaign promises, the current welfare system would not end abruptly under the Clinton plan. Rather, by 1996, adult recipients under age 25 would be required to enroll in training and take a job within two years. If jobs for the young mothers aren't available, public-sector jobs would be created. About a third of the 5 million adult recipients, those with disabilities or disabled children or children under age one, would be exempted. But this would not be workfare—recipients working off their benefit checks in menial or demeaning jobs. "The most important thing we can do is make real work pay better than welfare," says Bruce N. Reed, who heads the White House welfare task force.

To do that will require lots of help for

mothers. The current proposals envision varying degrees of child-care and transportation aid. All would pressure mothers to name the fathers at birth, and all propose mechanisms to enforce child support. The proposals assume universal health-care reform will pass soon.

The bills differ in the penalties to be applied to mothers. Moderate House Democrats would limit former welfare parents to three years of subsidized, community-service jobs before they are dropped. The bill also would impose a lifetime, two-year limit for AFDC benefits. The Clinton plan would leave many of these controversial determinations to the states—for example, the decision of whether to pay for additional children born to welfare moms. The House Republican version also leaves this decision to the states. But it contains other penalties, ranging up to elimination of AFDC.



DATA: HEALTH & HUMAN SERVICES DEPT., HOUSE WAYS & MEANS COMMITTEE, BUSINESS WEEK

The largest difference—and it's a critical one—is in the financing. Both House versions offset the expense of child care and job training and placement through a $20 billion, five-year budget cut. They would eliminate a range of federal entitlement programs, including Medicaid, for legal immigrants. (Illegal aliens are already ineligible for most federal welfare benefits.) Exempted from the cut would be elderly immigrants and those granted political asylum. "The first and most important responsibility of any government is to its own citizens," explains sponsor Dave McCurdy (D-Okla).

The Clinton bill has $9.5 billion over five years to pay for reform, potentially a fatal deficiency. Initially, a White House task force gave the President a blueprint for a five-year, $15 billion reform program. Much of the increased spending for child care was to have come from a $4 billion tax on gambling. But howls of protest from Nevada, Atlantic City, and Native American groups anxious to protect casino profits killed the tax. Instead, Clinton's program would be paid for by the benefit cuts for legal immigrants, by a hikes on wealthy Am cans, and by some off ting benefit cuts for less-well-off. Among the tential tax hikes: elimit ing subsidies to farm with nonfarm income ab $100,000 and ending the break for annuities that out more than $100,0 year. White House Bud Director Leon Panetta l ly has been covering Capitol searching for tax revenue. He's still e ty-handed.

COST CRUNCH. Clinton's billion estimate may be low, since the actual cos entitlement programs is ficult to estimate. One c of the Clinton propo Mark Greenberg, an at ney with the Center Law & Social Policy Washington, estimates cost could be nearly t much in just a single y Some want to spend more. Liberal critics are manding that welfare m receive wages high eno to lift their families well beyond poverty range. "We can't expect w fare recipients to flip hamburgers a an hour," says Representative Ha E. Ford (D-Tenn.). Ford favors a $9 hour wage for public-sector jobs. M while, the welfare reform debate is likely to renew calls to raise the m mum wage.

The Administration hopes to esc the cost crunch because of the so healthy expansion. If the economy c continue adding about 200,000 job month, actually below its performa

THE BATTLE TO REIN IN WELFARE

THE CLINTON PLAN

WHAT IT WOULD DO Require welfare recipients to agree to education, job training, or placement. Welfare mothers under age 25 who refuse would face a reduction or cutoff in cash benefits, generally after two years, with exemptions for new mothers or those unable to work.

DRAWBACKS Requires universal health care so working poor are not penalized. At $9.5 billion over five years, may be underfunded.

HOUSE REPUBLICAN VERSION (HR 3500)

WHAT IT WOULD DO Require welfare recipients to agree to education, job training, and placement within one to two years or face sanctions. Fathers must pay support or participate in a work program. No added benefits for children conceived during we fare period. Cut off entitlement benefits to legal immigrants.

DRAWBACKS Shifts some of the costs for legal immigrants to th states. Denying additional benefits for children born to welfare mothers just hurts the families.

MODERATE DEMOCRATS

WHAT IT WOULD DO Provide job training and placement and child care and health care for welfare recipients and transition workers. Set two-year lifetime welfare limit. Make grandparent liable for the offspring of their minor children. Cut off entitleme benefits to legal immigrants.

DRAWBACKS Shifts some of the costs for legal immigrants to th states. Lifetime welfare limit will be tough to enforce. Grandpar ents may not have the resources to support grandchildren.

DATA: BUSINESS WEEK

year, the rate would accommodate
new workers and welfare mothers
still shrinking the jobless rate.
Clinton Administration figures that
an additional 200,000 jobs will be
ed for welfare moms in 1999, rising
0,000 a year by 2004.
t successful job placement assumes
reform provides welfare families
adequate health care and child care.
ies show that as many as 20% of
re recipients stay on AFDC just to
the accompanying Medicaid bene-
or their children—particularly those
chronic illnesses. Infant care in a
y, licensed day-care center can eas-
st $900 a month—far beyond the
of entry-level workers.
lfare mothers may well decide to
home with their children rather
subject them to substandard day
no matter what the sanctions in
aw. "Why, just because I'm poor,
d I have to take my kid down to
dark basement to play all day
e all the dolls' heads are pulled
says Nixon.

NG TO PAY. Despite the potential
lls, White House advisers relish
ymbolism of a Democratic Presi-
going after deadbeat dads and
re cheats. That has the GOP Right
led and searching for ways to up
nte—such as requiring all able-
d recipients to work for their ben-
—a favorite of conservative Wil-
J. Bennett, the former Secretary
lucation.
esident Clinton says he holds out
ope that "welfare reform might
fire [and] we might have a bipartisan consensus to move the bill in a hurd get it this year." That would likeive a boost to Democrats in
mber. But election-year politics will
lly make it tougher to get a bill
year because any welfare reform
y of the name is going to cost a
ore than the $9.5 billion envisioned
e Clinton plan and much closer to
18 billion to $20 billion in the two
e bills. Under the new budget rules
ngress, that has to be paid for. The
l ploy of making states and nonvothe legal immigrants—foot the bill
pass Congress.
t gimmicks may not be necessary.
have shown that voters are receptto paying more for improving wel-
And few people naively believe it's
to be simple to "end welfare as
now it," as Clinton has promised.
here is a chance to make the sysfairer, reward work, foster indence, and encourage families to stay
her. Just doing that much would
major victory.

Paul Magnusson and Howard Gleckin Washington

THE SYSTEM DOESN'T WORK. THIS MIGHT

The key: Turn welfare into a job-creating machine

PROVIDE WORK Dora Young sees her $6.17-an-hour job as a stepping stone

After three decades of bitter debate, the political system now seems on the verge of a remarkable consensus: Welfare as we know it must end. Changing a system so obviously flawed is a worthy goal, but the challenges are enormous. How can the typical welfare family—an unwed mother with two kids, little education, and few job skills—become self-sufficient? "Never in history," says Douglas J. Besharov of the American Enterprise Institute, "have poorly educated single mothers with children been an economically viable family."

But it is not hopeless. Emerging alternatives to welfare, although still small-scale and local, show promise. BUSINESS WEEK endorses a set of proposals that would slash welfare rolls by at least half—moving 2.5 million moms and nearly 5 million kids into mainstream society within two years. These proposals are based on a simple concept: Work is better than welfare. They would focus on getting welfare moms—and 90% of adults on welfare are mothers—into the private sector. Public-service jobs would be available but only as a limited, last resort. Fathers would have to provide financial support to their children.

Any reform plan must help those on welfare without sending the wrong signals to those already working. BUSINESS WEEK would continue benefits for the disabled and those with very young or ill children. Those able to work, who choose not to, would receive no cash benefits, but food stamps and medical care would still be available to kids. Working mothers would receive child and medical care, though only until they could support themselves.

Welfare reform would work best combined with a health-reform plan that gives equal access to medical benefits. Added child care may give welfare mothers an advantage over the working poor, but that may be a necessary price to pay to move moms into the workforce.

NEW HOPE. BUSINESS WEEK'S proposals are not punitive. Instead, they seek to provide the poor with the same incentives as the rest of society: Those with intelligence and ambition will use their newfound jobs as stepping stones to more rewarding work. A majority may never get beyond low-paying jobs. But life will change because they—not government—would be responsible for their lives and those of their children. "We need to be saying it's good to work," says top Clinton welfare adviser David T. Ellwood.

Fixing welfare in this way could cost upwards of $4 billion a year—at least

double what Clinton says his plan will cost. That figures a $4,000 annual tab for a child's day care, vs. Clinton's estimate of $1,700, plus $5,000 a year for each public-service job. Make no mistake; it would be cheaper to keep sending welfare checks. But consider the social costs: White women, for example, are six times more likely to go on welfare as adults if they come from a welfare family. Young black men who grow up on welfare are three times more likely to go to jail than those who do not.

Many newly working mothers will pay taxes, and that will help offset the cost—perhaps $1 billion. The rest would come from spending cuts. Eliminating operating subsidies for Amtrak and setting user fees for the air-traffic-control system would save more than $2 billion annually. Trimming agriculture subsidies could save $2 billion more. Paying the bill will be tough, but the real challenge will be getting people working, restoring families, and giving kids some hope. Here's how BUSINESS WEEK would do it:

■ **JOBS, JOBS, JOBS.** There is widespread agreement among experts that up to two-thirds of the adults on welfare are employable. And most say they want to work. To help them, the system must be retooled to focus on skill training, job search help, and developing close ties to local businesses that can provide the jobs. These positions will be mostly entry-level and won't pay much to start. But with child care and medical benefits, they'll be a start on the road to economic independence.

That's what's happening at The New Hope Project in Milwaukee. Begun in 1990, it provides a wage subsidy, child care, and health benefits, but only for those who are working. Participants must look for private-sector jobs, though some take temporary community-service jobs. Early results: 60% of the 52 volunteers work in local companies.

One success story is 36-year-old Dora Young. A high-school dropout, the Milwaukee mother of five had been on and off welfare for 12 years. But a year ago she landed a full-time job with Marriott Contract Services Inc., cooking lunches for students at Marquette University. Young makes $6.17 an hour, so she's still getting an income supplement, plus food stamps and Medicaid. Her goal: "To get experience to get a better-paying job."

Not everyone will find work right away, so new public-service jobs will be needed. But real reform will succeed only if there are enough private-sector jobs to absorb the 2 million or so new workers. Recent studies suggest that work is out there—especially in an expanding economy that is creating about 250,000 positions a month. "It is realistic to think they can find jobs," says Labor Secretary Robert Reich.

Still, many jobs are in the suburbs and would require long commutes. Others just don't pay enough to pull a mother and two kids above the poverty line of $11,000. Says former Commissioner of Labor Statistics Janet L. Norwood: "There are a lot of jobs for unskilled workers willing to accept minimum wage or just slightly above it."

HOW TO FIX WELFARE

FOCUS ON WORK Make welfare a short-term safety net, as intended. Require healthy adults to work, but offer job-linked training. Continue assistance to the disabled and those with young or chronically ill children.

TARGET PRIVATE EMPLOYMENT Strive for permanent private-sector jobs. Make public service jobs temporary and a last resort. Abandon workfare. People should work for paychecks, not welfare checks.

PROVIDE PROPER INCENTIVES Today welfare, food stamps, and Medicaid are a better deal than a low-wage job. Instead, provide new workers with tax credits and health and child care. Phase out benefits as pay increases.

SUPPORT FAMILIES Now, the welfare system tears families apart. Change tax and support laws to encourage marriage. Provide family planning at an early age. Establish paternity at birth. Force fathers to help support kids.

ALLOW STATE FLEXIBILITY The most creative welfare solutions increasingly come from state and local governments. Let states run welfare within federal guidelines.

DATA: BUSINESS WEEK

■ **PROVIDE TRAINING.** Welfare recipients can survive on such entry-level jobs, but good job training is critical if they are to do better than that. Most of the government's 50-plus training programs for welfare recipients have been well-intentioned but ineffective. To succeed, training must address the basics—arriving on time and taking orders—as well as job skills. And it must be tailored to the needs of individuals and the local market. Ideally, training ought to be tied to specific jobs. Such training won't necessarily cost much: We can retool existing programs, get rid of failed ones, and focus on what works.

Denver's Family Opportunity Partnership shows the promise of targeted training. The program works closely with a local temporary agency, Sunny Side Inc./Temp Side. It teaches w processing, computer programming, receptionist skills and provides pla ment in clerical and secretarial jobs. the 20 participants hired by Sunny S 13 have either gotten a permanent or are temping full-time.

■ **CHILD CARE.** Giving up a welf check—and the related package of f stamps, child care, and the rest—doe make sense if the payoff is a low-w job with fewer benefits. "Mothers welfare would love to work," says M sachusetts Governor William F. W "if they had health care and child ca He wants to abolish welfare but use savings to provide those benefits.

Training and financial support hel Cynthia Hayes, a 31-year-old divor mother of three who has b on welfare for three ye The Denver program led through a word-processing job-search course, then hel her land a $7-an-hour job. Hayes says she couldn't h done it without adequate— state-financed—child c "There was no way," she s "Child care would have c me $900 a month."

■ **REBUILD THE FAMILY.** Near million children from one-p ent families live in poverty help them, the economic emotional links between thers and children must be stored. Paternity should disclosed at birth. Dads who are able should contrib child support. Others sh be given training and, if ne ed, made to perform a pub sector job. Finally, family p ning must be taught early reduce the number of unw ed pregnancies.

■ **LET STATES LEAD THE WAY.** All too ten, federal rules stifle state welf initiatives. Welfare programs ough be turned over to the states that they are free to experiment, w in guidelines set by Congress. problems leading to welfare depende are ultimately local, and state offic have been most successful in craf solutions.

Today, the adults and children on fare suffer daily from a well-intentio but misguided system. It will take y to retool welfare into a job-creating chine. But until that is done, too m citizens will be denied a stake in future. By focusing on jobs, the proc can at least begin.

By Howard Gleckman and I Magnusson in Washington

intel inside
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CHIEF EXECUTIVES

THE NEW LIFE OF O'REILLY

Heinz's globe-trotting CEO focuses on a fresh mainstay: Baby food

Sitting in his Pittsburgh office 60 floors above the Allegheny River, Tony O'Reilly gives a talking tour of the world. The chairman of H. J. Heinz Co. describes being rocked by an earthquake in Calcutta as he recently toasted the purchase of a baby-food business there. He recalls long philosophical discussions in Harare, Zimbabwe, with Robert Mugabe, that country's Marxist leader. At 58, O'Reilly is famous for his entertaining tales of the people he knows and the places he has been. But he suddenly grows testy when asked if reports are accurate that he only spends several days a month at Pittsburgh headquarters. "That's absolutely, grotesquely untrue," he says.

Anthony J. F. O'Reilly has always raised eyebrows with his globe-trotting. But with two years of sluggish sales and earnings depressing Heinz's stock price, some O'Reilly watchers are expressing fears that he's spending too much time on outside interests ranging from newspapers to oil wells. Penny-pinching U. S. consumers have turned away from the company's premium-price brands, slowing domestic sales to the pace of Heinz's famous ketchup. A strategy that relied heavily on Weight Watchers Food Co. for growth has helped put Heinz's once plump profits on a diet (charts).

In the midst of this malaise, one of O'Reilly's largest institutional shareholders complains that the chairman "is too far removed from the day-to-day issues." Fourteen Research Corp. analyst Sally Schaadt says Wall Street worries he is "spread too thin." O'Reilly, who averages 500,000 frequent-flier miles a year (and some years hits 1 million), makes no apologies for his prolonged absences from Pittsburgh. But he concedes that the company's brand-oriented strategy isn't working and that Heinz is in need of a new direction.

SWAN SONG? O'Reilly says he wants to lift the company back to the double-digit earnings growth it enjoyed in the '80s and then retire in two or three years. To get there, he says, the company must slash spending on its mature brands—the same lines that propelled growth through the '80s—while pushing vigorously into faster-growing markets abroad. Already, Heinz has cut advertising outlays to 40% of the $134 million it spent in 1990, according to Competitive Media Reporting in New York. Now it is spending heavily to bolster its international operations—especially in baby food. Meantime, it will also focus on the prosaic but profitable business of supplying those little packets of condiments to fast-food restaurants. The idea, O'Reilly says, is to reduce Heinz's dependence on ultracompetitive, low-margin American supermarkets.

To underscore the urgency of Heinz's situation, O'Reilly in mid-May flew his 40 top managers from around the world to Dromoland Castle in Shannon, Ireland, one of his investments. He wanted to present the new strategy and fire up his troops—especially Heinz's quarte[r] division managers. An ambitious tea[m] cost-cutters known within Heinz as [the] Four Horsemen of the Apocalypse, t[he] executives are well aware that such [a] in the next two years could spell mil[lions] in Heinz's legendary stock incentive[s]. They also know the race is on am[ong] them for the top job when O'Reilly f[i]nally retires (table, page 66).

On May 23, however, the whole t[eam] got a jolt when it learned that Sa[ndoz] Ltd., the Swiss pharmaceutical po[wer] was buying Heinz's chief baby-food co[m]petitor, Gerber Products Co., for a s[tu]ning $3.7 billion, or 29 times earni[ngs]. Whereas Gerber—which controls 70[%] of the domestic baby-food business—[has] shied away from the international ma[r]kets Heinz tends to dominate, cash-[rich] Sandoz isn't likely to be so bashful. [Con]sequently, O'Reilly spent the next th[ree] days phoning and faxing furiously [to] wrap up two international acquisitions for $210 million: Farley's baby-food b[usi]ness in Britain and the baby-food uni[t of] Glaxo Holdings PLC in India.

The question is: Will this strat[egy] work any better than the last one? I[n] years ago, while Heinz was relentle[ssly] driving up the prices of its condime[nts], Ore-Ida potatoes, Star-Kist tuna, [and] Weight Watchers low-cal dinners, O'[Reilly] predicted his company would gr[ow] from $5.2 billion to $10 billion in sales [by] 1994. Then he would retire, perhaps [to] pursue politics in Ireland.

Having already boosted Heinz's m[ar]ket value from $900 million to $9 [bil]lion by 1990, O'Reilly was a man to [be] believed. And his huge compensat[ion] package—$75.1 million in salary [and] stock options in fiscal 1992 alone—[re]flected how much he had charm[ed] Heinz's board. "You know in your he[art] he shouldn't get that much money," s[ays] one director, asking not to be nam[ed]. "But it's hard to say no to Tony."

As it turned out, Heinz has gro[wn] to only $7 billion in worldwide sal[es], much of that through acquisitio[ns]. O'Reilly now admits that he failed [to]

t quickly enough as a spendthrift ket turned miserly in the 1990s and ed increasingly to private-label prod-. As recently as last year, when p Morris Cos. slashed its premium ette prices on so-called "Marlboro ay," O'Reilly pooh-poohed the idea name brands would continue to ggle against private labels. It was after announcing a 20% fall in i-quarter earn- last January O'Reilly vowed id a better strat--and to stick nd long enough e it through.

Reilly now con- s that nobody a bigger vested est in a Heinz re- d than he does. 1.28% of the com- 's stock is worth t $108 million. As ompany's largest idual stockhold- I suppose I have argest individual n for wanting to around to ensure the recovery is ained," he says. it he certainly have distrac- . During his 25 s at Heinz, 15 of running the pany, O'Reilly has tructed twin ca- s spanning the tic and has piled personal fortune out $500 million. all O'Reilly's suc- raking in the h, however, his ures have had troubles.

originally envi- ed his holding pany, wilton, as a -powered leveraged-buy- firm ("We will be the front for the guys who revolutionize pe," he predicted in 1988). But iggest deal has been the lackluster isition of crystalmaker Waterford gwood PLC, a money-loser its first years under Fitzwilton's control. erford turned a profit last year, ly by shipping out production to ries in Germany and Eastern Eu-. But while this nudged Fitzwilton the black, the holding company is ly the power that O'Reilly had d for.

At the same time, his attempts to make it into the big leagues of newspaper publishing have fallen short. Two years ago, his Dublin-based newspaper chain, Independent Newspapers PLC, lost a bitter fight with Canadian Conrad Black for control of Australia's John Fairfax Group newspaper empire. Then just last winter, O'Reilly's group tried to buy control of Britain's *The Independent*—and got beaten by Mirror Group Newspapers PLC, the company once controlled by the late Robert Maxwell. O'Reilly was left with 29% of the shares but no board seat. He has had to content himself with this year's purchase of a 31% stake in South Africa's largest newspaper group, Argus Newspapers.

O'Reilly maintains that his only executive job is at Heinz and that his other holdings are merely investments. "In all those non-Heinz activities, there are highly paid, highly motivated, and highly irritated CEOs," he says. "They do not like being told that this distant figure bought this, sold that, and appears to be in nine different places at once—when they're actually doing all the work."

TALK OF ESCAPE. In fact, O'Reilly spends about half of his time outside the U. S., flying with seven or eight thick portfolios, a virtual traveling office. His Heinz travels take him to Europe, Southern Africa, and Australia, which is convenient, since those regions contain many of his non-Heinz holdings. With modern communications, he says, he can keep in touch no matter where he is. But his Irish holdings also require a physical presence. "Even if he just attended board meetings—and he does more than that—he'd be spending time here," says O'Reilly's Ireland spokesman, James Milton.

O'Reilly complains that people take one look at his vast holdings and immediately conclude that he's "a bionic man." Well, talk to his colleagues at Heinz, and that's the image

O'REILLY'S EXTRACURRICULARS

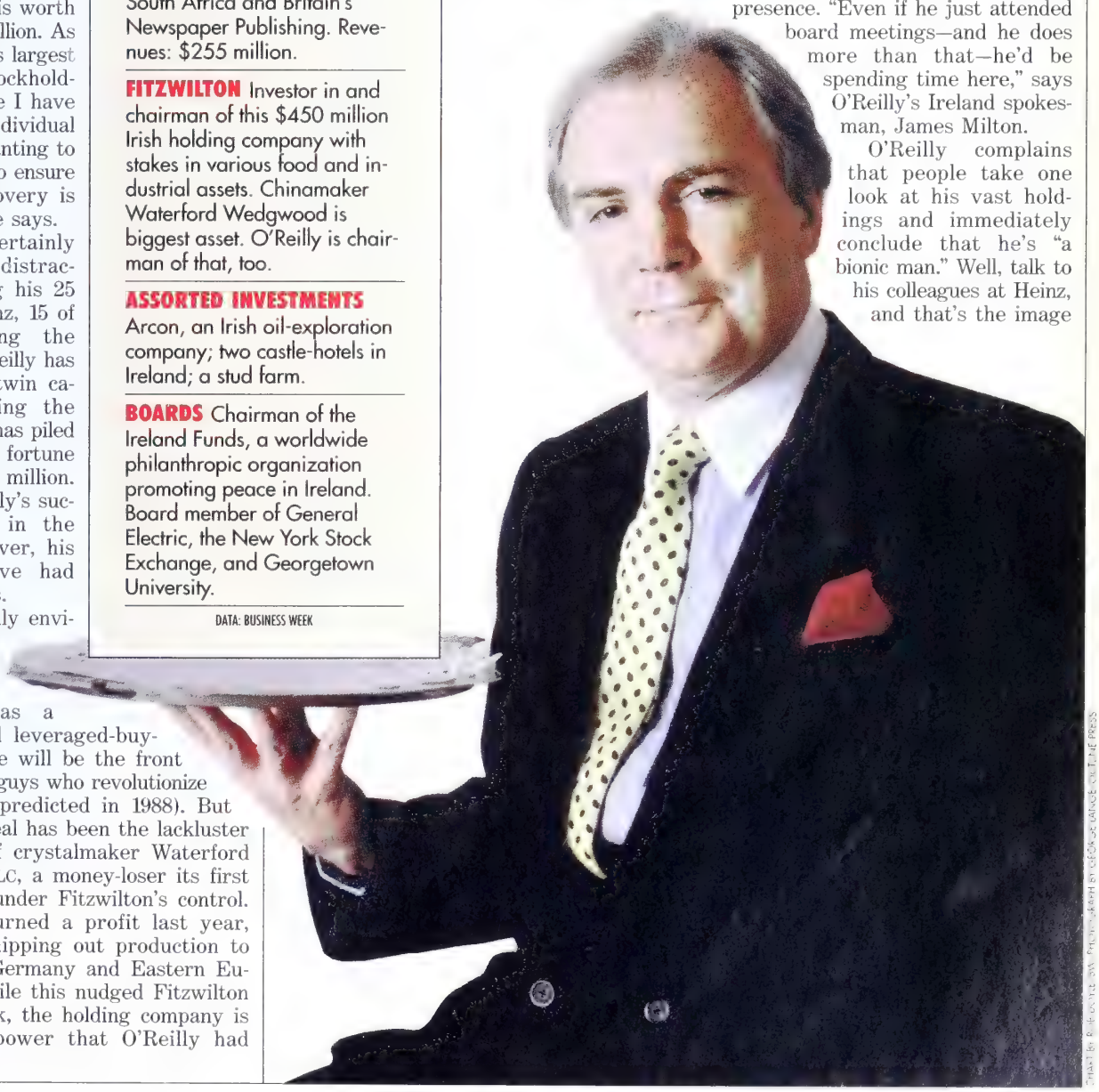
INDEPENDENT NEWSPAPERS Largest investor in Ireland's largest newspaper chain. Based in Dublin, it also owns small papers in Australia and this year bought large stakes in the Argus Newspapers of South Africa and Britain's Newspaper Publishing. Revenues: $255 million.

FITZWILTON Investor in and chairman of this $450 million Irish holding company with stakes in various food and industrial assets. Chinamaker Waterford Wedgwood is biggest asset. O'Reilly is chairman of that, too.

ASSORTED INVESTMENTS Arcon, an Irish oil-exploration company; two castle-hotels in Ireland; a stud farm.

BOARDS Chairman of the Ireland Funds, a worldwide philanthropic organization promoting peace in Ireland. Board member of General Electric, the New York Stock Exchange, and Georgetown University.

DATA: BUSINESS WEEK



that emerges. They describe a speed-reader with a photographic memory—one who needs little sleep and stays up late piling through history books on Africa and biographies of his hero, Winston Churchill, and the gritty Pittsburgh boxer, Billy Conn. At the meeting in Ireland with his 40 lieutenants, O'Reilly's dinner table was always the last to break up as the chairman discussed world affairs or told stories about his early days as an Irish rugby hero.

The main point of the meeting, however, was Heinz's "breakout strategy"—a plan that focuses squarely on the places Heinz thinks it can grow. With name brands getting killed by private labels, the biggest U. S. growth market is the deadly dull, but high-margin, food-service business. Packets of ketchup and mayonnaise produce annual sales of more than $1.4 billion and an operating profit of more than $200 million. And in April, Heinz acquired Borden Inc.'s troubled food-service business to broaden its market strength. O'Reilly, calling food service "an unsung hero," thinks that it can grow from 20% of Heinz's overall sales to 25% in five years.

A SELLING PLATFORM. For real growth, however, O'Reilly is betting on overseas markets—particularly those on the other side of the Pacific. That's why, in 1992, Heinz spent $300 million on Wattie's Ltd., a New Zealand food conglomerate O'Reilly is turning into a platform for selling into Asia. Boosted by Wattie's, Heinz's Asia sales have nearly doubled in two years, to about $750 million. "The whole [upcoming] annual report," says O'Reilly, "is going to be about Wattie's."

Within these new distribution channels, along with those acquired from Farley's and Glaxo, O'Reilly believes that baby food is the growth engine of the future. Jars of mashed carrots and peas already earn a 25% margin on $631 million in sales, and the new acquisitions will boost sales to nearly $750 million—about the same size as Gerber's. Gerber is indomitable in the U. S., but its share drops to 17% internationally. Heinz, meanwhile, weighs in with 29% of the market overseas.

In some respects, baby food seems custom-made for Heinz. Virtually no private labels weigh down the market, and entrance costs are high—keeping out small-timers. What's more, enormous potential markets exist in Asia, Eastern Europe, and Latin America, where population rates are high and where mothers who traditionally have not bought any packaged baby food are starting to insist upon such modern conveniences. "We should be over $1 billion shortly," predicts Brian Ruder, Heinz's baby-food chief. With "virgin markets" such as China doubling within 24 months, Ruder predicts the business will grow 10% to 15% a year.

But now Gerber has Sandoz, and suddenly, Heinz faces a tough global competitor. The Swiss company has strong operations in Asia and Europe and a cash horde of $4.4 billion—money Sandoz says it will spend liberally on Gerber. Heinz will likely feel the heat first in Sandoz' home territory—countries such as Switzerland and France, where baby food is sold in the pharmacies that already do a lot of business with Sandoz.

Moreover, Heinz has stumbled over bold predictions about the future be[yond] Take Weight Watchers, a busi[ness] O'Reilly said would top $3.3 billio[n] 1994. In fact, it posted sales of only [$]billion. With the growing popularit[y] diet foods, Weight Watchers foun[d] self in a devastating price war [with] ConAgra Inc.'s Healthy Choice [and] Nestlé's Lean Cuisine. Heinz respo[nded] with massive R&D, turning out a [flood] of exotic low-cal products, from sti[r-fry] dishes to ice-cream pie.

But while Heinz counte[d] strong attendance at We[ight] Watchers classes to prop up [sales] new products, the craze for c[old] ing cooled. "America is now [the] fattest country in the world [and] getting fatter each day," c[om]plains a frustrated David W. S[cul]ley, the Heinz vice-president [who] has been overseeing We[ight] Watchers. A much ballyhooed [ad]vertising campaign featuring [Jane] on-the-air diet by former *CBS* [*This*] *Morning* anchor Kathleen S[ul]van bombed, and now O'Reil[ly] cutting back the budget, shif[ting] from television to direct-mail [and] telephone marketing.

GOLDEN COUPLE. Whether O'[Reil]ly can do better than that [with] his new strategy is an open q[ues]tion. But his appeals to [Wall] Street for patience and an [an]nouncement that Heinz wo[uld] buy back as much as 6% o[f its] own stock seem to have st[abi]lized the share price. "Yo[u're] guaranteed to have more ba[ck] than dieters," says Nomi Ghe[z], food industry analyst at G[old]man, Sachs & Co.

When in 1991, O'Reilly mar[ried] 44-year-old Christina Goulan[dris], an heiress to a Greek ship[ping] fortune, some thought he m[ight] soon retire from Heinz and [go] off to tend to his European in[ter]ests. The couple certainly wo[n't] n't be wanting. Chryss, as she's kno[wn] breeds horses in Normandy and is [one] of the top five racehorse owners [in] France. Her own net worth is estim[ated] at $450 million.

O'Reilly, however, says that was [all] a lot of talk. And each of the F[our] Horsemen figure their boss is too r[ich] of a competitor to back out while H[e] is anything less than it could be. "[I'd] like to continue to be a transatla[ntic] person," O'Reilly says. That's fine [as] long as he can keep his focus on res[ult]ing growth at Heinz.

By Keith L. Alexander and Step[hen] Baker in Pittsburgh, with Julia Flyn[n] London and Doug Payne in Dublin

THE SUCCESSION RACE

WILLIAM R. JOHNSON *45,* president of Star-Kist Foods, head of Pet Products division, and director for Asia region. Based in Cincinnati and still not on the board, Johnson may have trouble making his case. But the recent Asia assignment gives him a chance to shine in O'Reilly's biggest growth market.

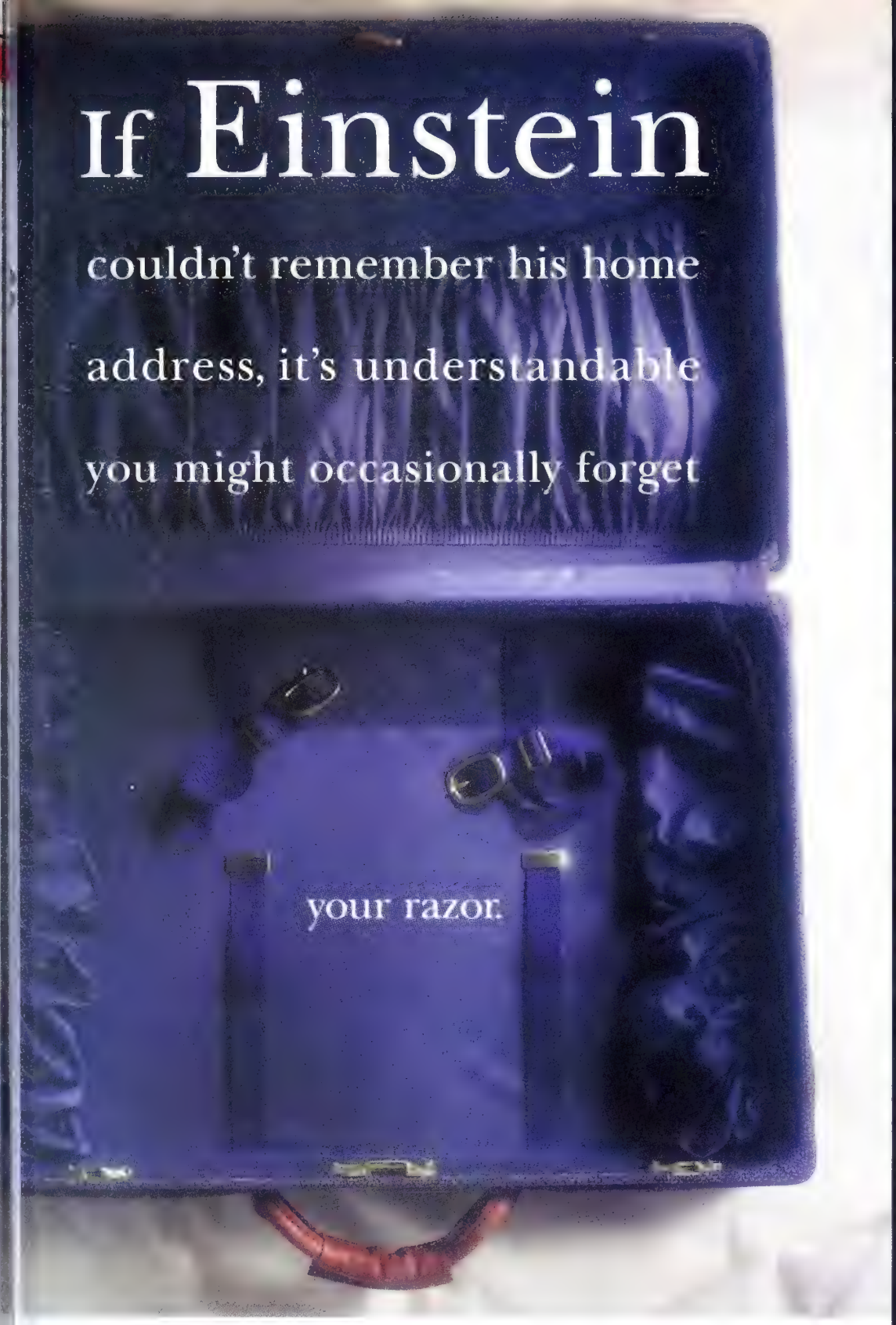
DAVID W. SCULLEY *48,* senior vice-president. Long regarded as heir apparent, Sculley stumbled with Weight Watchers. Yet he talks to O'Reilly at least once every day, more than the other aspirants. If Sculley can turn around Weight Watchers on the shoestring budget he has been handed, his stock could recover.

WILLIAM C. SPRINGER *54,* president of Heinz U.S.A. At times abrasive, Springer has had some run-ins with unionized workers. But he has quietly built the Food Service business into a giant. Springer leads Heinz's charge into Latin America, an area O'Reilly doesn't like. But Latin profits could boost Springer's prospects.

DAVID R. WILLIAMS *50,* chief financial officer. Williams has known O'Reilly since their days working together in his native Britain. He also directs strategic planning, perhaps a stepping stone for a broader role at the company.

DATA: BUSINESS WEEK

DAVID SCULLEY: ONE OF THE FOUR HORSEMEN



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INVESTIGATIONS

WHAT THE HECK IS A 'PRIME BANK' NOTE?

The feds say it's a scam used to con even sophisticated investors

When Lawrence Gerschel received his M. D. in 1978, his grandfather, legendary financier André Meyer, couldn't have been prouder. The Lazard Frères & Co. chief and adviser to the rich and famous, including the late Jacqueline Kennedy Onassis, admired great physicians and donated huge sums to medical research. In 1979, Meyer died at the age of 81, leaving a fortune conservatively estimated at $90 million to his wife, Bella, Lawrence, and three other grandchildren. About three years later, Gerschel, then reputedly worth at least $30 million, chucked his medical career for the business world. If Meyer knew what regulatory and law enforcement authorities allege about his grandson, he might turn over in his grave.

BUSINESS WEEK has learned that the Securities & Exchange Commission and the Manhattan District Attorney's office have launched investigations into Gerschel's New York-based Trust Group, which he set up in 1991 with two partners. Sources close to the D. A.'s probe say that a grand jury has recently issued subpoenas to Gerschel and his partners to determine whether the firm has trafficked in the netherworld of phony "prime bank" instruments, including notes, debentures, and guarantees.

MUSHROOMING. The sale of prime bank instruments, according to authorities, is a mushrooming but little-publicized financial scam that has hoodwinked hundreds of investors, many of them financial professionals. The instruments are marketed by promoters as debt or similar obligations purportedly issued by the "world prime banks," as some offering materials put it. They promise often outlandish, risk-free returns—typically 25% or more per year. Accompanying documents look official and often use the letterheads of real banking institutions, particularly foreign ones, such as Deutschebank and Barclays.

In fact, authorities say, documents purporting to represent such investments are bogus, with no connection to any bank. After selling the paper and perhaps making a few interest payments, promoters usually move the money offshore—where investors can't retrieve it—and disappear.

In recent months, the Comptroller of the Currency, the SEC, and other U. S. and foreign agencies have issued many warnings to financial institutions about "illegal or dubious schemes" involving prime bank instruments, as one release put it. James E. Byrne, a law professor at George Mason University, estimates that over the past few years, investors worldwide may have lost $500 million or more in these transactions, which he believes are being perpetrated by as many as 1,000 "hard-core pushers."

Promoters often assure would-be investors skeptical about the high returns that prime bank investments are a secret wholesale market to which only governments, big banks, and other insiders normally have access. Even reputable institutions have been taken. Numerous investors lost hundreds of millions of dollars in a scam involving $1.2 billion in bogus prime bank guarantees issued by the Czech Republic's Banka Bohemia. That episode triggered the April collapse of the bank and left the National Council of Churches $8 million poorer. The Salvation Army in Britain and the government of Nauru lost millions in earlier swindles. "We've only seen the tip of the staggering losses we'll see in the next couple of years," says Byrne.

The Trust Group's activities, authorities say, show how some prime bank schemes operate. They are looking into a recent transaction where they claim the Trust Group nearly duped officia several counties in Kentucky and advisor, then known as Shearson man Brothers, out of as much as million. The Trust Group, they hoped to move the money to Fossba a small, now-defunct bank in the Fa Islands, a semi-autonomous territor Denmark in the North Atlantic.

"FRAUD." The Trust Group, which ated out of a modest Manhattan a ment, has not been charged with wrongdoing. But John Shockey, sp assistant to the Comptroller of the rency, referring to prime bank in ments, says: "I've never seen any dence that they engage in any legiti buy-sell transaction." A spokesperso Deutschebank—which Trust Group aging Director Jeffrey M. Moritz cit a deposition as a prospective issu says: "We don't have a product like Those things are a total fraud." M denies that either he or the Trust G committed any wrongdoing.

In promoting themselves, say au ities, Trust Group officials libe played on Gerschel's involvement. thorities believe that Gerschel, wh atives and acquaintances say is n about financial matters, may have seduced by those involved with Trust Group into letting them ex his name and fortune. Gerschel, 45, is the Trust Group's senior partner nies any illegal actions: "I know by stretch of the imagination I've beh well, and I don't have to justify th anybody." He also denies that the T Group committed any wrongdoing.

A PAPER TRAIL

he Trust Group's prime mover, say orities, was Sandi Kalez, a self-de- ed securities trader who once ar- ed car loans, acquaintances say. Ac- ing to Moritz's deposition, she inced Gerschel and Moritz, a lawyer former tennis instructor who had Gerschel's business partner, to e into the prime bank business, in h she claimed, according to docu- s at U. S. District Court in Frank- Ky., to have achieved great suc- Kalez did not respond to repeated hone messages.

n account of the Trust Group's Ken- y deal, which would have been the s largest, can be pieced together the court records. In late 1991, igh intermediaries, the Trust Group ected James M. Hatfield, a former college basketball coach and a broker

> "We've only seen the tip of the staggering losses we'll see in the next couple of years"

"rolling trades" program. According to court records, the pitch went this way: Using KACO's money, the Trust Group, through intermediaries, would buy tranches of $10 million face value of "prime bank guarantees" yielding 7.5%, at a discounted price of $8.3 million. The Trust Group would then sell them for $8.9 million to unspecified buyers, generating for KACO a gross profit of 1% of the face amount for each trade. Documents show that the Trust Group represented to KACO that it could execute at least four transactions per month for each tranche, implying a minimum annual return of 48%. Hatfield later said in a deposition that he was satisfied that the program assured that the "risk is zero." Hughes replies: "I do not believe that the Trust Group committed any wrongdoing or that the KACO transaction was fraudulent or in any way illegal."

In July, 1992, the first slug of about $32 million began moving to Shearson's account at Chemical Bank in New York. The Trust Group hoped that KACO's investment would balloon to as much as $150 million over the next few months. Court documents indicate that the money was to move to an account at a branch of Sanwa Bank California and then possibly to Fossbankin, where it would have been beyond KACO's reach.

Fortunately for KACO, a clerical glitch at Shearson stopped the money flow, Hatfield says. A Shearson manager, according to his deposition, became alarmed when he learned of the transaction. Unable to find an authorizing letter from KACO, he halted the deal. KACO executive Fred Creasey says the prospect of what might have happened to KACO's money "scares me to death."

DISARRAY. The glitch precipitated a complex flurry of legal battles. The Trust Group sued KACO for default in U. S. District Court in Frankfort. The case moved to arbitration, and—in another surprising twist—the American Arbitration Assn. in Los Angeles awarded the Trust Group $625,000 in lost profits plus legal expenses. KACO is challenging the award. The arbitrators issued no reason for its ruling and declined to discuss the case. But court records and interviews with participants indicate that the arbitrators apparently did not consider evidence of the possible illegality of the prime bank instruments. The arbitrators also refused to consider information from KACO lawyers that the SEC was investigating the Trust Group. Said KACO attorney Phil Williams, "Until we learned of the SEC investigation and became aware of some of the bulletins the federal regulators were putting out, we were unaware that all of these types of transactions were fraudulent on their face." Hatfield now has second thoughts about the deal: "I've not been able to find one person who believes [prime bank instruments] exist."

Despite the award, the Trust Group has fallen into disarray, mainly because of intensifying local and federal probes. Moritz says the firm is no longer "an operating company." Indeed, Gerschel, Moritz, and Kalez appear to have gone their separate ways.

In a luncheon interview, a visibly distressed Patrick Gerschel, a New York investor and former partner at Lazard Frères, reflected on his brother's predicament. "People who are motivated by money usually breathe it 24 hours a day. That's not the Larry Gerschel I grew up with," he said. "[Larry] should have stayed a doctor."

By Phillip L. Zweig in New York

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earson's Lexington (Ky.) office. One clients was the Kentucky Associa- of Counties (KACO), which adminis- a huge pool of cash for most of the s 120 counties. Says a Smith Bar- nc. lawyer: "The attempted transac- ıappened over a year before Smith ey acquired the retail offices of son. As a result, we're not pre- to comment on the specific facts e attempted transaction."

e of the intermediaries was Denver ney T. Robert Hughes, who sold eld and KACO on the Trust Group's

WHAT JOSEPH JETT'S DEFENSE WILL LOOK LIKE

The ex-Kidder trader is expected to charge that his bosses knew he was generating phony profits

A rogue trader who created $350 million in bogus profits in a scam designed to pump up his own bonus to $9 million in 1993? That is how Kidder, Peabody & Co. has portrayed Joseph Jett, whose activities are at the center of one of the biggest Wall Street scandals in years.

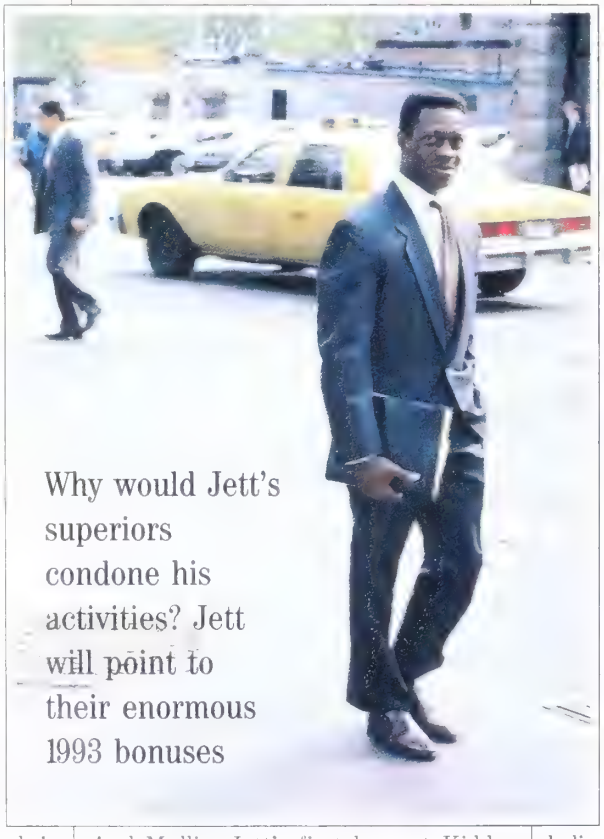
So far, Jett, who was dismissed from Kidder, has said little other than protesting his innocence. But the outlines of Jett's possible legal posture in any retaliatory action he might take against Kidder or in defending against possible government charges are becoming clear. Based on conversations with Wall Street experts, former Kidder employees, and other knowledgeable sources, it seems likely that Jett will strongly dispute Kidder's version of events. He is expected to charge that his supervisors, fixed-income honcho Edward A. Cerullo and fixed-income derivatives chief Melvin R. Mullin, knew all about his trading and that Jett himself was unaware he was doing anything wrong. "His defense [will] be that his trading practices were condoned and approved by" both Cerullo and Mullin, says Jeffrey L. Liddle, a New York attorney who has handled 28 cases against Kidder in the last five years.

PUPPET PLAY? More broadly, Jett is expected to portray himself as an unwitting marionette in a larger scheme by Kidder to manipulate its balance sheet to artificially boost results. General Electric Co., Kidder's parent, puts great stock in its units' financial performance.

Kidder declined comment on these potential charges on the grounds that the matter is largely in the hands of regulators. "Whatever positions Jett may take, I assume they would be directed more toward his defense in possible actions by the U.S. Attorney, the Securities & Exchange Commission, and the New York Stock Exchange," says John M. Liftin, Kidder's general counsel. GE also declined comment.

George Sard, Jett's spokesman, declined comment. Cerullo's lawyer was not available for comment. "Mel Mullin will deny any knowledge or participation in any wrongdoing by Jett," says Arthur F. Mathews, Mullin's lawyer.

To buttress his claim that he simply followed orders, Jett is expected to say he had extensive contact with the two men. Jett reported directly to Cerullo.



Why would Jett's superiors condone his activities? Jett will point to their enormous 1993 bonuses

And Mullin, Jett's first boss at Kidder from 1991 through 1993 and head of the derivatives unit, spoke to Jett every day on the trading floor, Jett is likely to claim. He will argue that his trades were listed on the daily position reports that went to management. He also may point out that he did not withdraw his multimillion-dollar bonus, which Kidder has seized and is now the subject of an arbitration dispute. "The fact that he left all that money there is indicative of someone who didn't think they were doing something wrong," says Lid

Cerullo and Mullin had two motive pursuing the bogus-trade ploy, Jett likely contend. One was that their bonuses were determined in part Jett's performance. Cerullo's bonus believed to be $12 million and Mul about $10 million.

But a broader reason for the sche Jett is expected to allege, was to h Kidder's financial results. He claim that at the end of e quarter, he was instructed superiors to put a certain kin government bond trade on I der's books—a "forward re trade," which had the effec temporarily shrinking Kidder's sets, some $73 billion at the of 1993. Briefly reducing as made the firm's return on as at the end of the quarter app higher. These trades would t be unwound the following and Kidder's balance sheet wo balloon up again.

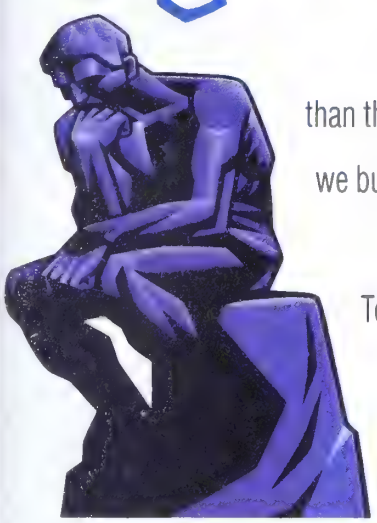
CREDIBILITY GAP? Jett may ther claim that Kidder relied this balance-sheet window dr ing to obtain a $3.7 billion l in March, 1994. Jett may all that he was told in December Cerullo that he should keep firm's assets depressed for a l er period at the end of the f quarter in 1994 so that Kid would continue to look good its bankers, who were examin Kidder's books. It was during period, he may claim, that a tors uncovered the scheme.

Some lawyers and observ believe it may be tough for Jett to pr these allegations if he should take or the subject of legal action. Even if can show that he didn't hide his tra the overall effect of continually rol over trades to generate phony pro was not necessarily discernible. And may not be believable when he arg that his superiors knew about the ph profits scheme, while maintaining t he did not. It will probably come d to his word against his bosses'.

By Leah Nathans Spiro in New

Innovation is *a little crazy.*

**In 1973, we built the world's largest power source.
20 years later, we built the smallest.**



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In Touch with Tomorrow

TOSHIBA

DEALMAKERS

MANAGED CARE, NICHE BY NICHE

Value Health takes in $1 billion serving neglected markets

The framed pink slip hangs proudly on Robert E. Patricelli's office wall. As he sees it, the elimination of his job in a 1986 reorganization at CIGNA Corp. may have been the best thing that ever happened to him. It cleared the way for the 53-year-old executive to capitalize on an idea he had broached with the insurer right before leaving: Start a specialty managed-care business to focus on neglected niche markets such as prescription drugs, workers' compensation, and mental health. CIGNA had turned down the idea, preferring to focus on its core health business.

CIGNA's loss has been Patricelli's gain. By buying and combining usually small, regional players and offering their services nationwide, Patricelli has built Value Health Inc.'s revenues to almost $1 billion. The Avon (Conn.) company has achieved a 70% annual growth rate over the past three years, and its stock is up 450% since it went public in 1991. "Bob Patricelli just had a lot of foresight," says Edward C. Bessey, vice-chairman of drugmaker Pfizer Inc., which has entered into a joint venture with Value Health. "It was a terrific strategic move."

When Patricelli hit the streets in 1986, he didn't need to do a hard sell. He had a stellar track record, having built CIGNA's health maintenance organization business into a big moneymaker. Past government positions, such as Deputy Under Secretary at the Health, Education & Welfare Dept., gave him access to policymakers. Armed with a two-page business plan that didn't even have financial projections, he quickly persuaded investment banker E. M. Warburg, Pincus & Co. to pony up $30 million.

Working out of a bedroom in his West Simsbury (Conn.) home, Patricelli made his first purchase in 1987, buying 40% of American PsychManagement Inc. for an undisclosed amount. Since then, he has bought 18 other companies. "We move a lot faster than our competitors," he says. Recent forays include a deal with Pfizer to create a company to test managed care in high-cost ailments such as ca diabetes, and heart disease. As pa the deal, Pfizer will sell drugs to V Health's pharmacy management ness at a discount. Also in May, Pat li purchased Community Care Net Inc., a managed-care workers' comp tion company, for $40 million.

RARE INSIGHT. Value Health has be a major force in its markets. Valu havioral Health, a provider of man care mental-health services, is the est such supplier in the nation, cov 14 million people. Another big m maker is Value Rx, a prescription- management unit that provides a 60%, or $530 million, of the corpora revenues. Other subsidiaries aren big but play vital roles. Lewin-VHI, ue Health's Washington-based policy sulting company, was hired by the gressional Budget Office to do the independent review of the financia pact of the Clinton health-care plan ing the firm an insight into refor forded few others.

Also impressive is Value Hea client list. It includes some of the tion's largest corporations, such as I Chrysler, and United Technologies. big insurers, such as Prudential In ance Co. of America, often subcon to Value Health.

Although the company's growth is likely to slow from 70% to 40% fo next two years, Wall Street is bu The company "more than meets lysts' expectations every quarter," Gary L. Pilgrim, president of Pilg Baxter & Associates, a money man holding 4% of Value Health's stock.

Are there any clouds on the hori One big issue is increased competiti the prescription-drug management ness. But analyst Ken Lauden of M gomery Securities says there's roo Value Health to grow, since its $1 b in revenue is only a tiny fraction o $220 billion health-care bill in its t areas. And Value Health says t could be $1 billion in revenue in c selling services to clients. If that' the company may become somethi an oxymoron: a giant niche player.

By Chris Roush in Avon, C

BULKING UP

NOVEMBER, 1992
Pays $44.2 million total for Complete Pharmacy Network and Stokeld Health Services, prescription drug management companies; Lewin-ICF, a health-policy firm; and Wellington Life Insurance.

JULY, 1993
Buys the Raleigh Group, a consultant to insurers; Center for Human Resources, an employee assistance company; and Associated Prescription Services, a drug management company, for a total of $10.2 million.

DECEMBER, 1993
Acquires biggest competitor in the mental-health-benefits field, Preferred Health Care, for $400 million.

MAY, 1994
Invests $50 million in a joint venture with drug giant Pfizer to develop a separate disease management company. Buys Community Care Network Inc., the country's largest managed-car workers'compensatio company, for $40 million.

DATA: COMPANY REPORTS

A car's past speaks volumes about its future. The more impressive the credentials, the better the likelihood it will perform its appointed tasks.

*Built In America***

Consider, then, the credentials of the Toyota Camry.

To borrow from the language of résumés, it comes highly recommended. *Automobile Magazine** has called the XLE V6 "the best car built in America."**

paramount. Which is why a passenger-side air bag† has been added for 1994. So now both driver and passenger can feel that additional measure of security. Naturally, safety credentials like side-door impact beams are built into every Camry, and available Anti-lock Brakes provide enhanced control under even the most challenging conditions.

A more powerful V6 engine is available, with 188 horsepower, allowing you to work effortlessly through the demands of highway

If You Could Interview Your Car, What Would Its Résumé Look Like?

Built in America, by Americans. In Georgetown, Kentucky, to be more precise.

As for on-the-job performance, Camry is known for working well with others. It not only has room for five adults, its interior amenities offer a level of comfort and luxury normally reserved for far more expensive cars.

Rave Reviews

Of course safety on the job is driving. Or, should you choose, simply put it all behind you.

Dual Air Bags†

May we suggest you pencil in a test drive soon? Call 1-800-GO-TOYOTA for a brochure and location of your nearest dealer.

You'll find the Toyota Camry even more impressive, one on one.

TOYOTA Camry

"I love what you do for me."

Buckle Up! Do it for those who love you. **Automobile Magazine*, September 1992. **Most Camrys are built in the U.S. †Always use your seatbelt. Driver- and passenger-side air bags are a Supplemental Restraint System (SRS). Shown with optional equipment. © 1994 Toyota Motor Sales, U.S.A., Inc.

BY GENE G. MARCIAL

HANOVER : A MAIL-ORDER BARGAIN?

The catalog business is sizzling, and several Street pros are betting that Hanover Direct will catch fire before long. The company, formerly the famous automat chain of Horn & Hardart, sold its restaurant business in 1992 and has emerged as the nation's sixth-largest mail-order marketer. Sales are expected by some pros to hit $1 billion next year, up from 1994's projected $800 million.

Hanover's stock, which reached 7⅞ in mid-March, has sagged to 5⅛. But some value investors have been buying in. "Hanover offers one of those rare opportunities where you can make three to four times your money in two or three years max," says investment manager Mark Boyar, who takes large positions in companies with shares selling below the intrinsic value of their assets. One such value-stock winner that Boyar caught early was Compaq Computer, which had traded as low as 27 a share in 1992; it's now at 118.

Boyar believes Hanover, which sent out 322 million catalogs last year, has a good shot at becoming the nation's leading direct-mail specialty retailer for one particular reason: It recently agreed to a joint venture with Sears Roebuck to produce catalogs for Sears' 23 million mail-order customers.

Together with Hanover's own 19 million customers, "this Sears-Hanover project will be a powerhouse in the catalog business," says Boyar. Hanover publishes 14 catalogs that offer more than 30,000 items in home furnishings, apparel, and general merchandise.

HEFTY DOWRY. Boyar sees much significance in the Sears-Hanover deal, which gives Sears an option to buy as many as 7 million Hanover shares at $10.57 apiece by 1998—provided the joint venture achieves certain sales and earnings levels. Boyar argues that the deal could lead to Sears' taking a sizable stake in Hanover once it proves it could be a leading force in direct-marketing—a business Sears abandoned. Including the sales from the Sears venture, Hanover could earn 30¢ a share next year up from 1994's estimated 19¢, some analysts say. It made 17¢ in 1993.

With its market capitalization at roughly one-half of Hanover's projected 1995 revenues—"and with the company's excellent growth potential—Hanover is undervalued both as a growth and value stock," says Boyar.

TUNED IN TO A COMEBACK OF CBs

It has not all been plain sailing for Cobra Electronics, a major designer, maker, and wholesaler of such consumer products as cordless phones and radar-detection devices. So its stock has gone nowhere—trading on NASDAQ at 2½ to 3 since early last year. But some pros who have been buying insist the stock is finally ready to make its move. What's the scoop?

"Cobra will be an easy double this year," says Michael Connor, a hedge-fund manager at Fahnestock, "because its several years in the red will be finally behind it." Cobra lost 70¢ a share on sales of $98 million in 1993. It lost $1.39 on sales of $117 million in 1992.

But "evidence of a meaningful turnaround has showed up in the three most recent quarters," insists Connor. He expects Cobra to be in the black throughout 1994, with earnings of 40¢ a share for the year—considerably more than Value Line's 10¢ estimate. Connor is even more bullish for 1995: He sees Cobra making at least 60¢.

The big reason behind Cobra's expected snapback, apart from cutting costs and disposing of unprofitable operations, is the resurgence in the appeal of citizens band radios (CBs), which have been its biggest moneymaker.

"Demand for CBs has come back in a big way," notes Jerome Ballan, an investment strategist at Fahnestock. He explains that the surge in popularity of cellular has revived interest in CBs. He argues that CBs are a cheaper way to communicate—for kids and adults alike. "People now find it fun to talk through CBs vs. more expensive cellular phones," says Ballan. Among Cobra's hot sellers are a cordless phone without an antenna called Cobra Antenna and radar and laser detectors called the Cobra Trapshooter.

THERE MAY BE GOLD IN THESE MINES

Most gold stocks have retreated from their highs after a sharp runup earlier in the year. "Gold will have to break out decisively above the pivotal price of $400 an oz. for the precious-metal stocks to challenge their recent highs," says investment adviser Charles LaLoggia. But he's a bull on gold stocks, nonetheless, because he believes the "weakness of the bond markets worldwide is giving the financial markets the message that inflation will be the big problem ahead."

He has been buying gold shares, and one stock that has intrigued him is virtually unknown—Glamis Gold, a Big Board stock that has fallen from 8½ in January to 5¾ in early May. Since then, it has edged up to 7⅛.

This underfollowed, Vancouver-based, low-cost-mining company operates three gold mines in California and is making money. Analyst Vahid Fathi of Kemper Securities expects Glamis to earn 30¢ a share this year and 36¢ next year, up from last year's 5¢. Already, Glamis has earned 25¢ in the first nine months of the year. Gold output in the third quarter soared nearly 70%, to 27,793 oz. The company has told him that its Picacho Mine in California's Imperial County has upwards of 1.1 million ounces of gold, although the company has not yet included these figures in its proven or probable reserve numbers. LaLoggia notes that the company also has four properties in Mexico that he expects will double Glamis' gold reserves within a year.

On its own steam, Glamis stock should climb to 10 this year, says LaLoggia. But if the price of gold climbs to $410 an oz., he sees the stock hitting 15. One gold bull, CBS Chairman and CEO Laurence Tisch, owns about 4% of the stock, notes LaLoggia.

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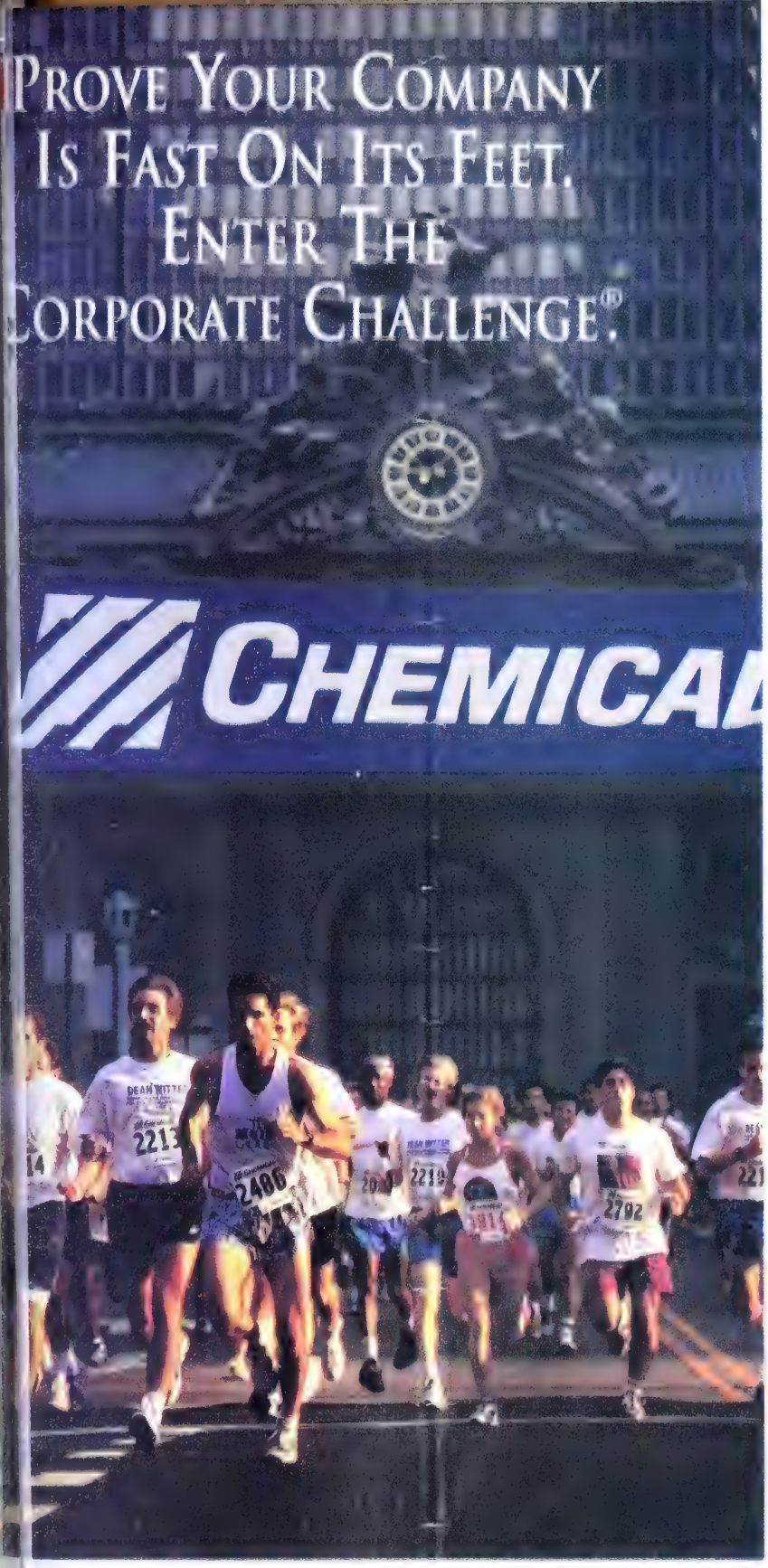

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SCHEDULE OF EVENTS

May 17	New York City #1	July 28	Boston, MA
May 26	Albany, NY	August 2	Syracuse, NY
June 7	Oslo, Norway	August 4	Chicago, IL
June 15	Frankfurt, Germany	August 11	San Francisco, CA
June 21	Buffalo, NY	August 16	Paramus, NJ
June 23	New York City #2	August 18	Princeton, NJ
June 28	Philadelphia, PA	August 31	New York City #3
June 30	Rochester, NY	September 13	Atlanta, GA
July 13	London, England	September 21	Los Angeles, CA
July 19	Stamford, CT	September 22	Dallas, TX
July 21	Orange County, CA	October 8	International Championship New York City
July 26	Morristown, NJ		
July 27	Long Island, NY		

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MCI: ATTACKING ON ALL FRONTS

It's expanding overseas and taking on the Baby Bells at home

For a quarter of a century, MCI Communications Corp. has succeeded with a single, simple strategy: kicking industry giant AT&T in the shins and grabbing whatever chunks of the long-distance phone business drop out of its hands. The David vs. Goliath shtick, combined with MCI's savvy marketing, has enabled it to grow from a small microwave communications operator serving two cities into a $12 billion corporation with 20% of the $60 billion long-distance market. Its success has prompted some rivals to say that MCI really stands for "Money Coming In."

But going into the multimedia future of global, deregulated telecommunications, MCI will have to take on a lot more than AT&T to keep the money coming in. The traditional lines between long distance, local phoning, cable TV, and wireless are collapsing. Congress is poised to pass legislation to let the seven well-heeled Baby Bells into long distance. Long-distance laggard Sprint Corp. suddenly looks formidable: its proposed $20 billion merger with Electronic Data Systems Inc. could produce an Info Highway powerhouse.

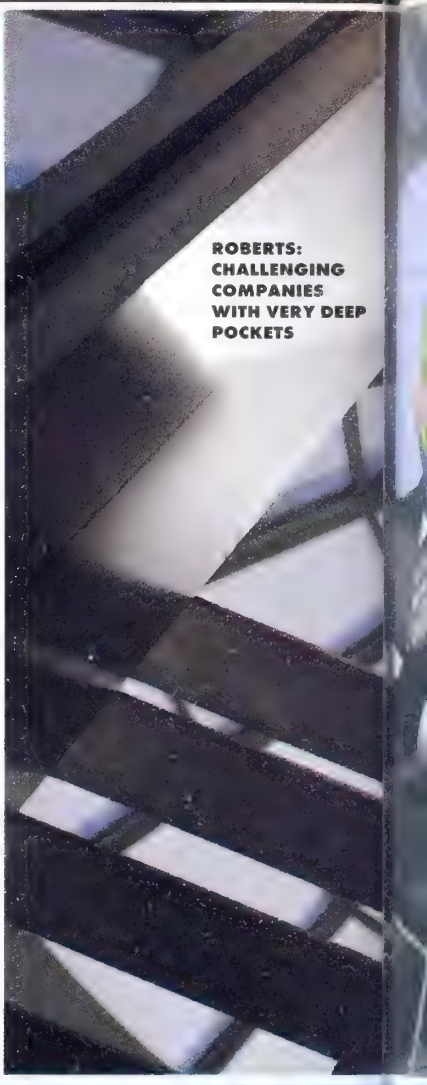
VAGUE DETAILS. MCI's response? Do unto the competition first. "We really need to reposture this company into a leadership role, not a following role," says MCI Chairman Bert C. Roberts Jr. To get out in front, Roberts now wants to reengineer the entire company according to a grand plan he has dubbed networkMCI. Unveiled in January, networkMCI is a $20 billion, six-year makeover aimed at weaving together the company's existing long-distance voice and data services with a new local-phone network and the latest in digital wireless services. Roberts describes the plan as "the sum of all the plans and opportunities we have in the new, emerging markets."

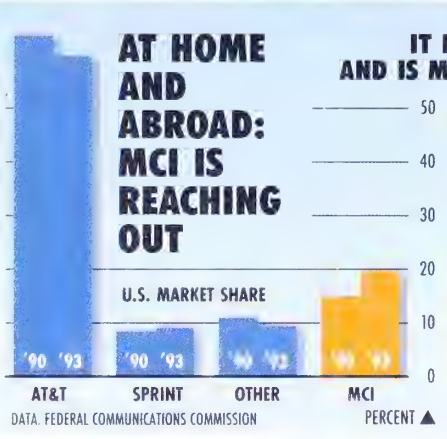
What does it all mean? Many of the details remain vague, but the overall thrust is to position MCI as a leader in the world of futuristic communications. In a series of corporate image ads—a first for MCI—Oscar-winning child actress Anna Paquin suggests some far-out possibilities for MCI's brave new telecommunications world. And the usually outspoken Roberts gets a bit Zen-like when describing his new direction. He says he wants the company to emulate the osprey that dive for fish near his Chesapeake Bay home. "You try and come up with a strategy that is based on what's going to happen—not what is happening," Roberts explains. "If the bird is going to catch a fish, he can't go to where he sees the fish now. He has to anticipate where the fish is going."

The analogy is lost on some. "MCI is embarking on a strategic vision where the endpoints aren't clear," warns S. G. Warburg & Co. analyst William N. Deatherage. For now, he rates AT&T and Sprint stock as buys and MCI as a hold.

Still, some parts of the master plan are clear: MCI wants to move aggressively into services and geographic markets that offer greater growth and earnings potential or boost long-distance profits. For instance, the company plans to spend $2 billion of networkMCI's $20 billion budget to build local-phone networks in 20 cities over the next few years—with an ultimate goal of providing local service in 200 cities by the year 2000. In February, it jumped into the booming market for wireless and data networks by paying $1.3 bi for a 17% stake in Nextel Commu tions Inc., which plans to build a tional wireless digital network tha will market. And it's about to s $150 million for a stake in In-F Phone, which has contracts to op air-to-ground phones on Continenta USAir (box).

MCI is on the move on the int





IT HAS BUILT UP U.S. MARKET SH... AND IS MOVING INTO NEW DOMESTIC M...

LOCAL SERVICE MCI Metro, annou... January, is a planned $2 billion fib... phone network that will bypass loc... phone companies.

WIRELESS In February, MCI annou... to buy a 17% stake in Nextel Com... tions, a leading provider of specia... mobile radio services that is buildi... tionwide digital network for voice ...

...AS IT LOOKS ABROAD FOR FUTURE GROWTH

rtnership with Stentor, the long-distance arm of the phone companies, to develop high-speed digital king U.S. and Canada.

tish Telecom plans to buy a 20% stake in MCI for . The two companies will form a joint venture to sell ork services.

tnership with banking group Grupo Financiero ccival to enter burgeoning Mexican long-distance ICI will invest $450 million over several years.

DATA: BUSINESS WEEK, MCI COMMUNICATIONS CORP

front as well. It has forged a key ic link with British Telecommuni- PLC, which agreed a year ago to I $4.3 billion for a 20% stake in npany. In Mexico, MCI has formed venture with Grupo Financiero ex-Accival, a financial syndicate ants to challenge the established n phone company. North of the , MCI is joining forces with Sten- Canadian phone company group, to create a digital network that will link the U. S. and Canada.

The few pieces of networkMCI that are well defined are not without potential problems. Ultimately, the joint-venture with BT is expected to win Federal Communications Commission approval. But Washington has slowed the deal by using the approval process to exact further concessions from the British on opening their telephone markets. The Mexico deal has numerous regulatory issues outstanding as well, and MCI will have to compete for licenses there with several well-heeled competitors, notably Bell Atlantic Corp.

MCI's wireless move may be one of its biggest gambles. MCI had been slow to move into wireless, announcing its Nextel purchase a year after Sprint bought the nation's ninth-largest cellular carrier, Centel, for $4.5 billion and six months after AT&T laid plans to acquire McCaw Cellular Communications, the largest cellular phone operator, for $12.6 billion.

NO LETUP. MCI's stake in Nextel is not quite on the same scale. What's more, Nextel's specialized mobile radio (SMR) technology, which has been used mainly as a two-way-radio dispatch service, is just now being rolled out as an all-digital competitor to cellular calling. So far, the system is only up in Los Angeles. Nextel must still build a coast-to-coast network and market the service, a project that the company says will take two years.

While MCI attempts to get its new ventures off the ground, it can't afford to let up in long distance, where it gets virtually all its revenues. For now, the picture is encouraging. MCI has recovered from a nosedive in 1990, when its profits and stock price dropped by half after a restructuring and intensified competition from AT&T. MCI clawed its way back with the help of the hugely successful Friends & Family discount program, which has boosted its long-distance busi-

DIALING INTO FLYING PHONES

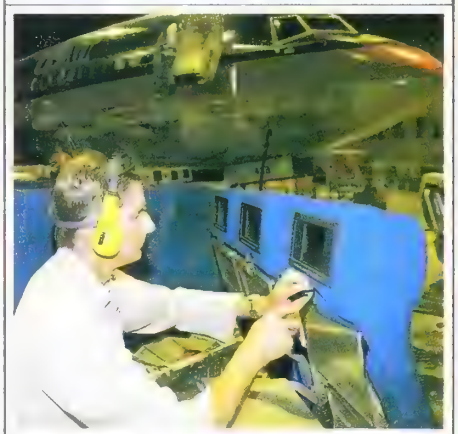
Where will the networkMCI plan take the No. 2 long-distance company next? How about aloft? This month, MCI plans to announce a deal to pay more than $150 million for an unspecified stake in In-Flight Phone Corp., a private company providing air-to-ground phone service. "We need to get up in the skies, because that's where our customers are," says MCI President Gerald H. Taylor, who confirms the negotiations.

Analysts say the deal, which reunites In-Flight Chairman John D. Goeken with MCI, the company he founded in 1968, should benefit both sides. In-Flight, based in Oakbrook Terrace, Ill., needs a deep-pocketed backer that can boost its credibility with airlines. And MCI gets into a market that's expected to go from less than $100 million now to $1 billion by the year 2000.

The proposed deal has already paid off. In-Flight had been vying with McCaw Cellular Communications' Claircom unit to sign up Continental Airlines, which was wary of In-Flight's small size. MCI was hesitant to invest unless In-Flight landed a big customer. Finally, MCI agreed to buy the stock, and In-Flight got the contract for Continental's 360 planes.

In-Flight, whose phones are connected to screens for receiving services such as e-mail, has 1,000 planes under contract, compared with 1,700 for GTE Airfone Inc. and 1,485 for Claircom. But the business will be up for grabs when current contracts expire. That gives MCI's marketeers time to do their thing—Friends of Frequent Flyers, perhaps?

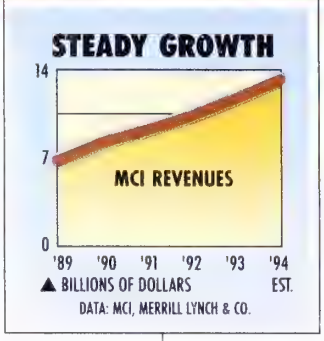
By Mark Lewyn in Washington



THE MARKET MAY HIT $1 BILLION BY 2000

ness by $1.2 billion annually. The company says its recent 1-800-COLLECT campaign has snagged an even larger market-share gain in the $3 billion collect-call arena (box). Warburg's Deatherage expects revenues to rise 14%, to $13.5 billion, in 1994, more than twice the industry average. And he estimates that earnings could hit $914 million this year, up 25% from the $731 million before extraordinary charges earned in 1993.

But, in the end, long distance is still a commodity—a phone minute. And revenues per minute keep dropping, which means that new ways must be found to cut costs. That's where MCI hopes its new local-calling business can pay off quickly. Part of the 76% jump, to $8 billion, in the company's capital-spending plan will go to creating local fiber-optic systems in New York, Los Angeles, and other major cities. The new cabling, using rights-of-way purchased from Western Union Corp. four years ago, will allow MCI to connect directly to big long-distance customers, bypassing the local Baby Bell's network and avoiding access charges. The potential savings are immense: MCI paid local carriers $5.6 billion last year—or 47¢ of every dollar it brought in access charges.



If going into local service makes financial sense, MCI's move overseas makes even more. The domestic long-distance market is growing by only 5% a year, while international calling is soaring at triple that rate. A critical part of MCI's international growth plan is the NAFTA market. Many of the company's existing customers have set up shop in Mexico and Canada to take advantage of the North American Free Trade Agreement, and MCI wants

MCI COLLECTS ON 1-800 C-O-L-L-E-C-T

Two years ago, the collect-call market was an unchallenged $3 billion-a-year mother lode for AT&T. Most collect calls are made from pay phones, and AT&T had long-term contracts with stores, airports, and hotels with pay phones. Snagging consumers seemed unlikely: People were accustomed to dialing 0 and the number they wanted, which kept them with AT&T.

But in early 1993, MCI Communications Corp. became intrigued by the untapped possibilities of this market. Now, after a year of watching MCI grab collect callers, even AT&T admits that their rival's 1-800-COLLECT campaign caught the giant napping. "They moved aggressively and quickly in a part of the market that had not been focused on," says Jack McMaster, AT&T's director of consumer-product marketing.

DOUBLE RATES. MCI's collect-calling coup illustrates the company's ability to move swiftly and craft shrewd sales campaigns—tactics that will come in handy as its ambitions expand. 1-800-COLLECT went from conception to launch in just 11 weeks, starting with market research that pointed up the opportunity: Collect calling prices remained relatively high because 57% of such calls come from pay phones that are under long-term contracts with AT&T or other carriers. A 10-minute collect call could cost from $4 to $6.25, depending on where and when you call—twice direct-dial rates.

The conventional wisdom, though, was that the caller didn't care about cost because the other person footed the bill. But MCI research found that of the 300 million collect calls placed annually, 24% are military personnel calling home, 33% are children calling home, and 70% of callers are under 30. That suggested that families might urge relatives to use a discount plan.

MCI Chairman Bert C. Roberts Jr. approved the idea the day it was presented. The first task for MCI marketing mavens was finding an easy alternative to dialing 0 and the number. "We knew the number was really important," says Angela O. Dunlap, president of consumer markets for MCI. The answer: 1-800-COLLECT. It's easy to recall, and it bypasses the carriers that have contracts with pay-phone owners. MCI also lopped rates, by as much as 44% off AT&T's operator-assisted rates. MCI decided not to mention its name, so no one would think only subscribers could use the service. Finally, ads targeted young audiences. Biplanes with 1-800-COLLECT flew over beaches, and television ads feature David Letterman straight man Larry "Bud" Melman.

DUNLOP: "THE NUMBER WAS REALLY IMPORTANT"

At first, AT&T dismissed the effort. But by September, the industry leader was pushing 1-800-OPERATOR. Four months later, AT&T had to step over. It turned out that MCI's division not to mention its name had been a master stroke. AT&T research showed that 50% of those calling the MCI number had assumed it was run by AT&T. Its researchers also were dismayed to learn that lots of callers, instead of dialing OPERATOR, punched in 800-OPERATER. And that, unfortunately, is an MCI toll-free number. MCI says it swept up a few hundred thousand dollars in mistaken calls as a result. In March, AT&T started over with 1-800-CALL-ATT.

Meanwhile, MCI has made inroads. The company isn't being specific, and independent numbers are hard to come by, but MCI claims its market-share gains in collect-calling exceed the two points of market share that Friends & Family snared in long-distance. A year ago, AT&T held 75% of the collect market, MCI had 11%, and Sprint 5%. MCI says 18 million U. S. homes received at least one collect call via its 800-number in the program's first year, up from 4 million collect calls through MCI the year before. That's something to write home about.

By Mark Lewyn in Washing

them there. Once networks in
o and Canada are in place, MCI
to create a three-country mar-
r long-distance that can offer ser-
such as Friends & Family
ghout North America.

IVALS. Hence the deal with Bana-
which has a private network that
its 650 branch offices throughout
o. MCI plans to invest $150 mil-
1994 and $300 million more over
ext several years for a 45% stake
oint venture with Banamex to
a public network to 250 cities.
nunications between the U. S. and
o are going to explode," says MCI's
trategist, Richard T. Liebhaber. "I
be there."

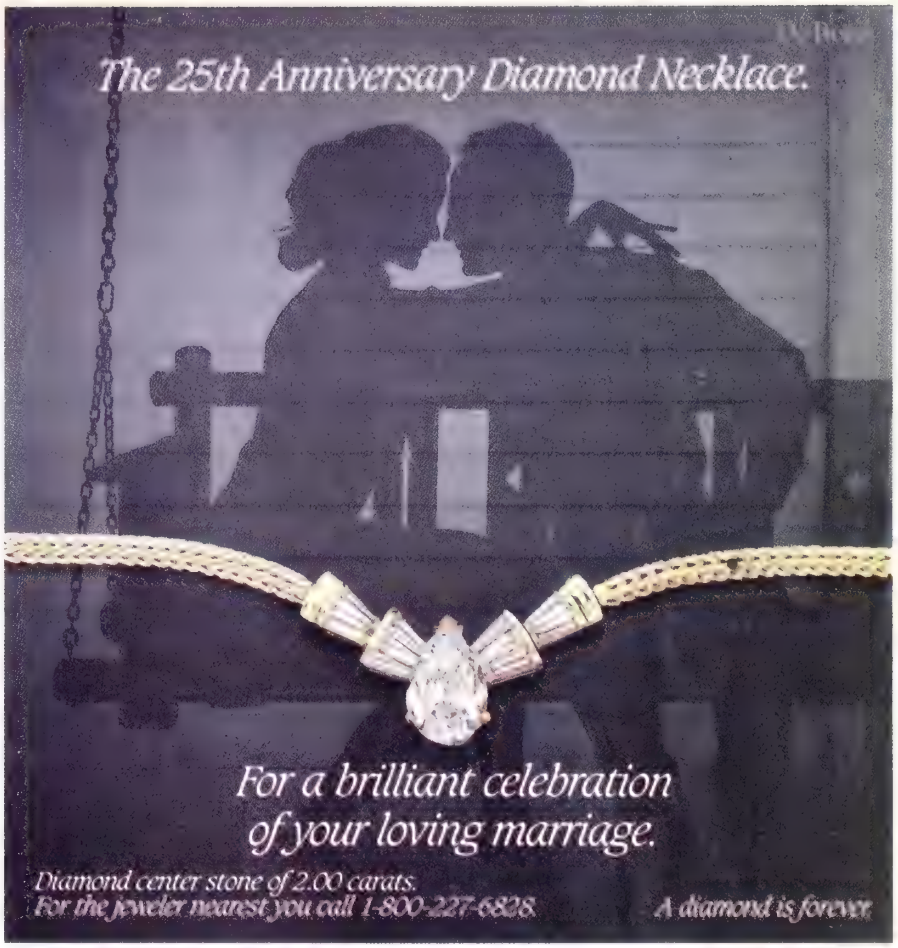
s summer, the Mexican govern-
plans to grant as many as six li-
for long-distance competition, to
n August, 1996. "We're confident
e will get one," says Manuel Me-
Mora, deputy president of Banco
al de México. The venture will
ormidable competition, however.
October, Bell Atlantic agreed to
billion to buy 42% of Grupo Iusa-
Mexico's second-biggest cellular
ny.

is hoping its alliance with BT will
a lot more international clout.
ll market services in North and
America, while BT will get the
the globe. Roberts says the part-
e talking to Japan's Nippon Tele-
& Telephone Corp. about joining
nture to market to the Far East.
le all of these deals are going
MCI is trying to hang on to the
sive style that got it where it is.
id a bureaucratic culture, execu-
ecently rejected plans to central-
rations around Washington on a
campus. "It could have saved us
s," says MCI President Gerald H.
. "But what will you give up?
begin to think they work at a
."

e's little danger of that. Free-
ng and fast remain the watch-
One recent example: When re-
showed that 60% of frequent
s travelers have missed a child's
ay and 40% have missed a
's birthday or a wedding anni-
y, MCI quickly launched "Guilt
a campaign to shame travelers
ling every night from the road—
, naturally.

big question, of course, is wheth-
s $20 billion gamble will pay off.
salesmanship will help, as will
iable record in the giant-slaying
ment. But MCI will need to be
han feisty and fast to make
's grand vision come true.

Mark Lewyn in Washington, with reports



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STRATEGIES

VICE-CHAIRMAN WILSON (CENTER): DON'T LISTEN TO THE CASSANDRAS

HIGH SPIRITS, HEAVY WEATHER

TWA's employee buyout has lifted morale—but not the bottom line

When it comes to morale, few airlines can match the enthusiasm of TWA's employee owners. After trading 45% of the once-bankrupt airline's stock for wage concessions last November, Trans World Airlines Inc.'s employees collected $14,800 among themselves to pay for two billboards in Kansas City proclaiming: "We are TWA and we are back."

But if this experiment in employee ownership has done wonders for morale, it hasn't done much for TWA. The St. Louis-based carrier is stuck with $1.8 billion in long-term debt. Its cash reserves are down to $134 million. Management has waffled on a key marketing strategy. Adding to the confusion is the recent exit of three senior executives.

Now TWA's vice-chairman, Robin H. H. Wilson, is hinting at layoffs. In a recorded message to employees in May, he said TWA is falling short of its financial goals for the critical summer period and will announce a new wave of cost-cutting measures. Only last month, Wilson said he believed TWA could avoid layoffs.

In fact, when competitors were slashing headcounts in 1993, TWA added 1,000 employees, boosting payroll to 26,000.

"There is a reluctance to furlough a employee-owned airline," says Glen Zander, who resigned as vice-chair in January. "People think they bo their jobs, and they don't want to out differently."

Small wonder that rivals and ana say TWA still faces heavy weather. the first quarter of 1994, it lost $80 lion on revenues of $761 million. S TWA emerged from Chapter 11 on 4, employee owners have seen t shares plummet 37%, to 3⅝. "Basic they have rearranged the deck ch on the Titanic," says analyst Kevi Murphy of Morgan Stanley & Co. son, who oversees daily operations, ters: "This company has a resilience people don't give it credit for."

ROCKY ROAD. TWA's woes have b implications for the airline indus which looks increasingly to emplo ownership as a way of reducing c UAL Corp., parent of United Air Inc., has agreed with its unions to change 55% of the company's share wage and benefit concessions. And analysts believe Delta Air Lines and USAir Inc. will make similar d But some airline executives, citing T experience, say that giving unio greater voice weakens manageme decision-making role. "I really feel we're doing at TWA is historic," c ters William F. Compton, head of pilots' union and a board member. don't have anyone coming in and d ing a road map for us."

TWA's employee shareholders h traveled a rocky road since Car Icahn, who bought it in 1986, left part of the agreement to bring TWA of Chapter 11, Icahn relinquished ow ship and employees gave up $660 mi in wage concessions for 45% of the line's equity and 4 of its 15 board s Creditors got most of the remai seats and the rest of the equity.

But the board has had trouble fi the corporate cock William R. Howard, compromise CEO ca date among union h ers and creditors, la only seven months fore the board as him to step aside. 71-year-old former c man of Piedmont lines raised TWA's f in September; t hours later, North Airlines Inc. annou a fare cut.

Howard was follo out the door the s

TURBULENCE AT TWA

Since emerging from Chapter 11 last November, the airline hasn't been meeting financial projections. Among its problems:

MANAGEMENT TURNOVER Three top executives have resigned since January, including Chairman William R. Howard, Vice-Chairman Glenn R. Zander, and Senior Vice-President Robert B. Cozzi.

OVERSTAFFING While other airlines' workforces shrank last year, TWA added 1,000 new employees. Despite wage concessions, its labor costs remain high.

CONFUSED STRATEGY After removing seats to increase legroom and promoting its Comfort Class seating, TWA has added seats back on Boeing 747s to take advantage of heavy summer traffic.

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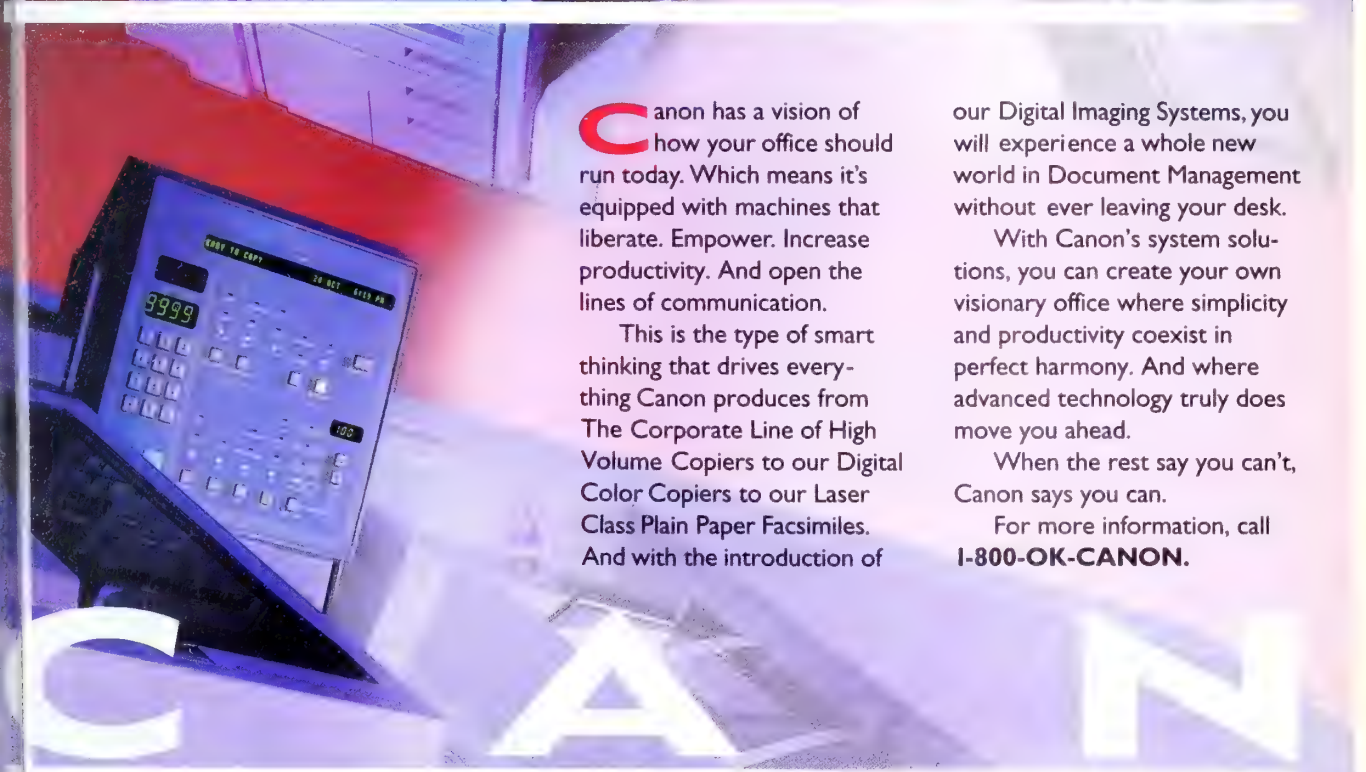

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day by Zander. Sources close to the board say the unions blocked his appointment as CEO because of his reputation as a cost-cutter. In turn, creditors opposed Wilson as CEO, thinking he wasn't tough enough. The board settled on another compromise candidate: Donald F. Craib Jr., a TWA director and former head of Allstate Insurance Co. with no direct experience running an airline.

TWA has also vacillated on its marketing. Its U. S. market share has slid to 4.8% from 11% in 1988. For a time, the airline seemed to have a strategy. Renaming its coach section Comfort Class in January, 1993, TWA removed seats to give passengers 30% more legroom and launched an ad blitz, calling itself "The Most Comfortable Way to Fly."

Business travelers cheered. But last month, TWA reversed itself, reinstalling 34 seats on its 747 jumbo jets to take advantage of heavy transatlantic traffic expected this summer. While the rest of the fleet still has the extra legroom, TWA had to junk its Comfort Class ad campaign overseas. Robert B. Cozzi, the TWA senior vice-president who devised the Comfort Class strategy, resigned three weeks ago in opposition.

ICAHN'S LEGACY? TWA's high cost structure hasn't helped. It spends 3.3¢ a mile in labor costs for each available seat. Only badly listing USAir exceeds that, with almost 5¢. Even the 15% wage concessions have done little to help. Junk-bond analyst Paul Davner, who tracks TWA's debt, believes the workforce needs drastic trimming—in the range of 20%.

In his message to employees, Wilson warned: "We are going over our 1994 budget again and looking for ways to reduce employee expenses by a meaningful amount between now and the end of the year." But even if he wants to reduce the payroll, he's likely to meet stiff union opposition. "The problem isn't that you have too many people doing the work, you don't have enough work for people to do," says Compton. He says TWA's unions are prepared to give up some contract provisions to cut costs.

But are such savings enough? TWA failed to meet revenue projections in January and February. It can't borrow money because virtually all of its assets are pledged, and analysts call chances of finding a large equity investor or merger partner slim.

Some analysts say it's unfair to judge employee ownership by TWA's example. Its problems are "the legacy of Carl Icahn," says Michael Boyd, president of Aviation Systems Research, a Golden (Colo.) consulting firm. Maybe so. But there's plenty of blame to go around.

By Susan Chandler in St. Louis

STRATEGIES

DIAL SUCCEEDS BY STEPPING IN BIGGER FOOTSTEPS

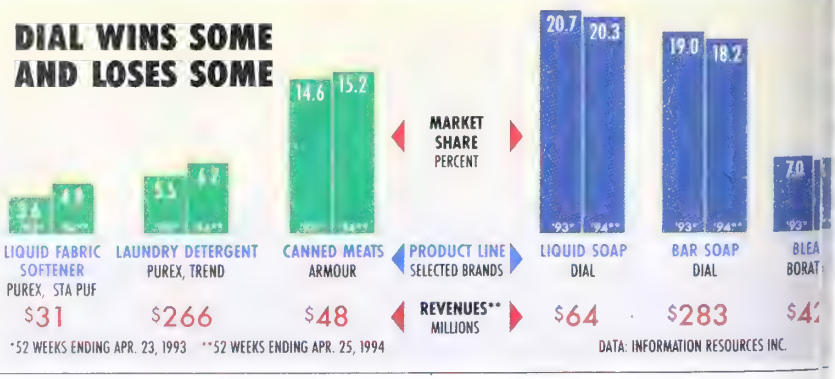
The consumer-products maker leaves risk-taking to others

WHEN CEO TEETS TRIED SOMETHING FANCY, HE GOT IN TROUBLE

Flashy, it isn't. Dial Corp. doesn't try to come up with innovative new products. It doesn't aim to build big-name, flagship brands. And it doesn't spend zillions of dollars to make its offerings household names across the nation. Instead, Dial prefers to coast in the slipstream of giant rivals, such as Procter & Gamble Co. Aside from Dial soap, the company's lineup consists largely of me-too products and second-tier regional brands.

That low-profile approach has been producing some pretty eye-catching results. Last year, Dial's earnings from continuing operations hit $110 million, a hefty 17% jump from 1992, on revenues of $3 billion, up 4.4%. And J. P. Morgan Securities Inc. analyst Heather I. Hay expects earning leap an additi 30% this year as enues rise Roughly half of D sales and earn come from an e tic mix of ser businesses that clude a money-o operation and an line-catering busi But Chairman CEO John W. T has managed wring 28 consecu quarters of impr operating inc from a clutch of sumer products such ordinarily s growth businesses as detergent, fa softener, and canned meat.

YOU FIRST. How does Dial do it? Ins of spending big on research and dev ment or marketing, Dial leaves it to ers. Its R&D spending is about 1.25 consumer-product sales, vs. 2% for industry, estimates Hay. Teets has overhauled Dial's manufacturing and tribution, cutting $12 million in an costs. And Dial lets other companie ucate consumers about new prod P&G, for instance, introduced concen ed powder detergents in 1990. Dia lowed over a year later with its concentrated version, Purex—price much as one-third lower than P&G's "They have figured out what a ve has to do to survive," says Gabrie


DIAL WINS SOME AND LOSES SOME

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Lowy, head of consumer-product research at Oppenheimer & Co.

Dial may have a hard time maintaining its stronghold in the bloody brand wars, however. Marketers ranging from P&G to Philip Morris Cos. have been slashing prices and repositioning brands to appeal to value-minded consumers (BW—May 2)—moves that are putting these titans squarely in Dial's territory. "The big guys are going to play me-too to the Dials of the world," says Gary M. Stibel, principal of New England Consulting Group. Already, Dial's share of some markets has slipped (chart, page 82).

Still, today's Dial is a far cry from the unwieldy conglomerate Teets inherited in 1981. He sold its $1.8 billion meatpacking business and Greyhound bus lines and spun off other units, using the proceeds to add to Dial's stable of service businesses and build its shelf of consumer brands. He bought Purex Corp. in 1985, added Breck hair-care products in 1990, and last year bought the $121 million Renuzit air-freshener brand from S. C. Johnson Wax Co.

FULL OVEN. Teets, 60, has learned the hard way to stay away from risky innovations. After spending $20 million to develop and launch a line of microwavable meals in 1986, he watched competitors invade the market and undercut his prices. These days, Dial's product introductions are largely line extensions, such as Dial Plus moisturizing soap.

Teets tends to concentrate his marketing firepower in specific regions. Last year, for instance, he quickly pulled Dial's Sno Bol toilet cleaner back to its core markets in the upper Midwest and Florida after a short-lived push outside flopped. "You withdraw from those markets where you don't have penetration and spend money in those markets where you have strength," Teets says.

And he does what it takes to keep Dial's retailers happy. The company makes private-label products for such chains as Winn-Dixie Stores Inc. and Food Lion Inc., a practice shunned by its larger rivals, which fear the discount products will undermine their premium brands. And Dial spends aggressively on trade promotions, says one retailer.

Dial has been burned whenever it has deviated from its unassuming recipe. Two years ago, the company spent $25 million to reformulate and reintroduce the Breck hair-care line in an aggressive nationwide launch. But the brand ran into brutal competition from rivals. "We should know better than that," Teets grumbles. Dial will relaunch Breck this summer as a value brand in regional markets at a lower price. Teets's path may not be glamorous, but he has taken Dial down some profitable byways.

By Amy Barrett in Phoenix

Science & Technology

BIOTECHNOLOGY

IMMUNE RESPONSE'S CARLO: "THE HURDLES WERE VERY HIGH" FOR HIS AIDS DRUG

ARE THE PATENT POLICE GANGING UP ON BIOTECH?

The industry is held to tougher standards than other drugmakes

Pursuing a treatment for AIDS may be easy compared to dealing with the U. S. Patent & Trademark Office (PTO). At least that has been the experience of immunologists Dennis J. Carlo and Jonas E. Salk, the legendary inventor of the polio vaccine.

In 1987, Carlo and Salk came up with a vaccine they believed could slow or prevent the onslaught of AIDS. They immediately applied for a patent. To win it, though, they couldn't show just that the vaccine worked in a petri dish. They were required to test it on chimpanzees and, later, in a trial involving people infected with HIV. The company that they co-founded, Immune Response Corp., got financial help from Rhône-Poulenc Rorer as a joint-venture partner. And without knowing if they would ever get a patent, the partners ended up spending $45 million before they finally got the O. K. last October. "We were lucky," says Carlo. "The hurdles were very high."

PATENT BLOCK. Far higher than they ought to be, many biotech executives say. After all, they argue, the purpose of a patent inquiry is merely to decide whether someone should get legal rights to an invention—not whether it's ready for drugstore shelves. Stringent rules that keep companies from getting patent monopolies may hurt their ability to raise capital and may slow down research, the industry complains. "We have a Food & Drug Administration that protects the public against drugs that don't work," fumes Robert P. Blackburn, chief patent counsel at Chiron Corp. in Emeryville, Calif. "The role of the patent office is to grant patents on inventions."

The PTO agrees that its examiners have often held biotech companies to a much tougher standard of usefulness than that used for makers of ordinary drugs, who don't often have to submit evidence from human trials. Some examiners who have required human clinical trials have said it's because the behavior of biotech products in the body isn't easily predictable from the way they behave in the lab.

Some venture capitalists appreciate the patent examiners' close scrutiny, which they say helps them by winnowing out marginal science. Take Kevin Kinsella, both a partner in Avalon Ventures, a venture-capital firm in La Jolla, Calif., and CEO of Sequana Therapeutics, a La Jolla company that is working on sequencing specific disease-causing genes. "Why should biotechnology be treated differently from any other technology developing something that's half-baked?" he asks. "The crybaby stance of biotech on this is unseemly."

Nonetheless, the patent office is starting to take the industry's complaints

y. Charles E. Van Horn, deputy
nt commissioner for patent policy,
ome examiners may have believed
uman clinical trials were a legal
ement for biotech patents. They're
ie says, adding, "we definitely
make some changes." As a first
he patent office has begun beefing
legal education of its 175 biotech
ners, many of whom are more
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TO Commissioner Bruce A. Leh-
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nsing Office.

PTO's impending moves should
ne of the chill off a big sector of
tech industry. Still uncertain,
is what will happen with patents
ences of DNA that have no dem-
ed usefulness. A major dispute
hen the National Institutes of
filed patents covering 6,000 par-
e sequences in 1991 and 1992.
PTO examiners cast doubt on the claims because the NIH hadn't figured out their uses. The NIH voluntarily withdrew the patent applications in February. But private companies—such as Human Genomic Sciences Inc. in Rockville, Md., and Incyte Pharmaceuticals Inc. in Palo Alto, Calif.—are charging ahead with applications on gene sequences.

SCALED-DOWN PROTECTION. Opponents of patents on sequences with no demonstrated usefulness say those patents would discourage other people from pursuing biotech products that might result from the sequences. The sequencing companies, however, disagree. Denial of patent protection "will turn our work into something like generic drugs, where our know-how is publicly available," frets Randy W. Scott, vice-president for research and development at Incyte Pharmaceuticals. "That's a disincentive for pharmaceutical development," he adds.

Plenty of lawyers are staying up late thinking of ways to get out of the impasse. Washington patent attorney Jorge A. Goldstein favors issuing patents for DNA sequences if it is proved that they can be used in a diagnostic product or scientific process, even if they can't actually cure a particular disease. Another idea, from San Diego lawyer Ned A. Israelsen, is to generate a weak, copyright-like form of protection for discoverers of gene sequences. Someone who might come along later and find a use for the sequence would then still be able to earn a patent for the application.

Those ideas and others (table) should get a full airing when the PTO holds hearings on the subject starting late this year. The perfect rule for legal protections on new inventions has never been easy to come by. But a sensible, predictable policy might unleash groundbreaking innovations that would benefit everyone.

By Catherine Yang in Washington, with Joan O'C. Hamilton in San Francisco

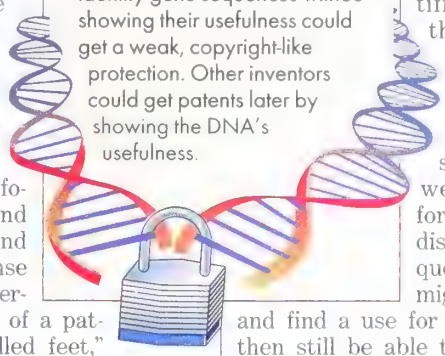
HOW TO SAFEGUARD BIOTECH INNOVATION

The U.S. Patent & Trademark Office is in a jam. It doesn't want to issue patents for biotech discoveries—such as DNA sequences—without evidence of their usefulness. But by being stingy with patents, it may frighten off potential biotech investors. Here are three ways to protect new ideas:

SWITCH THE BURDEN OF PROOF
Treat biotech like other fields: Instead of requiring applicants to prove usefulness, put the onus on patent examiners—to prove that a discovery isn't useful if they want to reject a patent.

LOWER STANDARDS OF EVIDENCE
Patent examiners would require only that an invention causes some pharmacological activity, not that it works as a drug.

TREAT DNA SEQUENCES DIFFERENTLY Scientists who identify gene sequences without showing their usefulness could get a weak, copyright-like protection. Other inventors could get patents later by showing the DNA's usefulness.



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evelopments to Watch

BY PETER COY

ERSTRONG GLASS H A SONG

Opera divas can shatter glass with an aria. But Alfred University scientist William LaCourse says sound waves can strengthen glass, too. His process could lead to superstrong windows and durable, lightweight bottles at a reasonable cost.

LaCourse's research began humbly: He exposed glass to everything from Madonna to Chinese

l music before settling on higher frequencies supplied by asonic horn—which is inaudible to the human ear.

sound waves speed up a well-established but slow s of strengthening glass chemically. In LaCourse's meth- iece of glass is heated to around 850F in a liquid con- potassium nitrate and then bathed in ultrasound. The of the ultrasound waves accelerates the leaching of so- ons from the glass. Each sodium ion is replaced by a potassium ion. The bulk of the potassium ions force mi- ic cracks in the glass to close. LaCourse is working iracon Inc., an Owatonna (Minn.) glass fabricator, to p the technology for larger pieces of glass. Without waves, chemical strengthening has been so time-consum- d expensive that it is used only for special applica- here strength is exceptionally important, such as in windows.

WARE THAT SMOOTHES DIFFERENCES AMONG DIGITAL TVs

etty much taken for granted that any television set in ountry is capable of receiving any television program. t's not true in the computer world: You generally can't IBM program on a Macintosh computer. Planners of ormation Superhighway fear that the incompatibilities g computers today could also hamper the computer- igital televisions of the future. Now, though, a Pitts- company is pushing a piece of software that could sit in- levision set-top boxes and smooth over hardware atibilities.

vision Computer Inc., whose founders include mem- Carnegie Mellon University's faculty, calls its soft- virtual machine" code. Other companies have devel- rtual machine code, including Sun Microsystems Inc.'s erson Inc. and Kaleida Labs, the joint venture of IBM ple Computer Inc. that is trying to make Macs and n the same multimedia software. But those are being se to the vest. Television Computer is offering to li- ts software without charge, hoping that a standard m" will create a broader audience for future program- om it and its partners.

core software, still under development, will be a small that gives set-tops a few basic capabilities, such as the to scan for data on the information highway. Company an Robert H. Thibadeau, a senior research scientist at Carnegie Mellon's School of Computer Science, says that companies could customize the boxes for specialized functions.

The concept is attracting plenty of interest. "Whatever we can do to make the set-top box more interoperable is a good thing," says Richard Ducey, senior vice-president for the National Association of Broadcasters' research and information group.

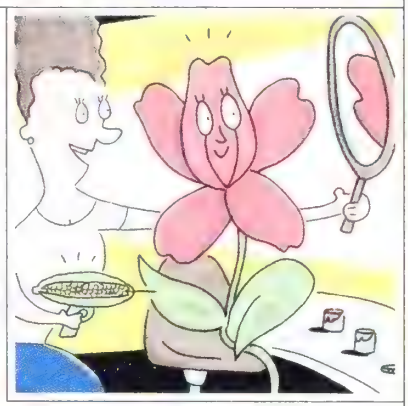
A MODEL OF THE HEART'S MECHANICS

Mechanical engineers study buildings and bridges. Why not one of nature's engineering marvels—the human heart? Under a $7 million National Institutes of Health grant, mechanical engineers are teaming up with cardiologists to see whether it's possible to stave off heart problems in adults and children by correcting the organ's development in the womb.

There are plenty of opportunities for the heart to go awry in utero. It starts beating at 17 days and doesn't stop from then on, even as it changes from a simple tube of muscle into an elaborate, four-chambered pump. Much is known about the genetic factors behind heart disease, but little about the mechanical forces that affect the assembly of the heart. That's where engineers from the University of Rochester and Rochester Institute of Technology come in.

The goal of the Rochester work is a 3-D computer model of the heart that shows in real time the effect of both cell biology and mechanical forces on individual cells. Similar computer models could be applied to other organs—such as the brain, lung, and kidney—that undergo tremendous shape changes during development.

PLANT BREEDERS DISCOVER A STRAIGHT SHOT TO SUCCESS



Breeders of white orchids have to wait for three to six years, when a hybrid blooms, to see if it produces the desired albino petals. But U. S. Agriculture Dept. scientists have developed a method that allows them to get a sneak preview in just three days.

The secret? A "gun" that sprays white petals with microscopic gold pellets. The pellets are coated with a gene from corn plants that turns on pigment production. If the corn's regulator gene causes the orchid's white petals to turn color, breeders know that the orchid's own regulator must be broken—which is what they want. Left alone, an orchid with a broken regulator is sure to produce white offspring.

Breeding white orchids isn't such a big deal by itself. But Robert J. Griesbach, an Agriculture Dept. plant geneticist in Beltsville, Md., says the gene gun should be useful in all kinds of plant breeding. By shedding light on regulator genes, the process may even help scientists understand human cancers, which can be caused by regulator genes gone haywire, Griesbach says. Don't worry about using up a lot of gold, by the way: Each pellet is a tenth the size of the period at the end of this sentence.

EDITED BY AMY DUNKIN

Mutual Funds

SHOULD YOU BUY YOUR NO-LOAD FROM A TITAN?

It all started with a press release on July 20, 1992. That day, the king of discount brokerages, Charles Schwab, said it was eliminating transaction fees on the sale of mutual funds from 10 no-load companies. A year later, Schwab had amassed $4 billion in the program and announced plans to expand to 200 funds. The same month, mutual-fund giant Fidelity Investments returned fire, launching a no-transaction-fee program that added eight fund families to a lineup dominated by its own no-loads.

The media battle has only intensified since then. On May 9, Fidelity added 198 funds from 10 families and upgraded its auxiliary literature on investments. "We've tried to take a good idea and improve on it by offering more top-performing funds," says Roger Servison, managing director of Fidelity Investments. On May 16, Schwab began offering 86 more funds from 16 families to its institutional clients. And investors can expect more announcements to come. "This hasn't been played out completely yet," says Charles Schwab.

SUBTLE DIFFERENCES. Fidelity's FundsNetwork now includes 327 funds for no transaction fee plus 1,600 for a sales charge. Schwab's no-transaction-fee OneSource plan is up to 254 funds, although nearly 500 more funds are available for a fee. But despite all the advertising hoopla, does one industry titan's no-fee program have it over the other? Both serve investors well—not simply because they waive transaction fees but because they make it easier to manage a portfolio of funds from different families. Both offer a single statement, one phone number to call, an easy way to switch among funds, and cash-management accounts.

Freed from a barrage of statements from different funds, investors with sizable holdings can concentrate on creating a diversified portfolio and monitoring it, says Don Phillips, vice-president of Morningstar, the Chicago fund-rating and research service. All you do is fill out a transfer form and let the brokerages take care of consolidating the funds you already own—even if they're not in the program—into one account. But don't sign on thinking you can trade at will for free: Both Schwab and Fidelity start charging transaction fees after the fourth short-term redemption (from any fund held less than six months) in your account in a 12-month period.

The differences in the two programs tend to be subtle. First, they do not share the same fund lineup. Schwab's no-fee list includes some excellent companies, such as INVESCO Funds Group and Twentieth Century, that have not joined with Fidelity because they view it as a rival. Fidelity has a potential conflict of interest in that it sells its own no-load funds side-by-side with its competitors'. But there is no sign that Fidelity pushes its funds over those of other groups, and 31 fund families have proved willing to overlook the possible conflict.

For obvious reasons, Fidelity does not permit Schwab to offer its funds for no-transaction fee. "For me, that is the biggest difference between the two programs," says Avi Nachmany, an analyst with Strategic Insight, a mutual fund research and consulting firm in New York. "If you want to have part of your portfolio managed by Fidelity, you can't get it for no-fee through OneSource." However, Fidelity only offers 86 of its 202 funds without a action fee, so if you wa buy one of its low-loads still must pay around sales charge.

As far as customer s goes, both Schwab and ity have 24-hour 800 nu

ıg via computer, and a h of materials to help ıake selections, some of for a small charge. Fi-, however, has just ht out a performance di-y for mutual funds that ore user-friendly than ab's. With it, Fidelity reated an *Investment er* workbook that ex-how to invest across classes to minimize risk ieet long-term goals. Fi-also offers software on ing in overseas markets, ment planning and as-ocation. But Schwab be-investors don't need all glossy materials and software packages. "They are just making investing more complicated," says Hugo Quackenbush, senior vice-president at Charles Schwab. "You don't need software to tell you how much you can have in equities."

LOCATION, LOCATION. Both Schwab and Fidelity have offices replete with trained representatives, free materials, and computers that provide historical data and current share prices. Fidelity, however, has only 77 branches, while Schwab operates 202. Fidelity seeks "quality and not quantity" in its investor centers, says Servison, but if you like to do business face-to-face, you should see which company has an office located near you.

Indeed, Schwab's and Fidelity's programs are so similar and so good that choosing between them is the least of your worries, says Nachmany. "Both satisfy a wide range of financial needs, and most fund companies will eventually be on both programs," he predicts.

But you may not want to be in either. Phillips points out that many people could use the advice of a full-service broker or a financial planner, which they will have to pay for. And even for people who want to stick to no-loads, the programs have their limitations. The fund families pay the two brokerages .25% of assets a year to maintain the accounts. So when you buy a fund through Fidelity or Schwab, you give up a direct relationship with the funds. Although you still receive the legally required mailings, such as the annual reports, you may miss out on the shareholder newsletters. Also, if you want to move part of your portfolio into cash, you are limited to using Schwab and Fidelity money market funds, neither of which have the top-performing funds in this category.

Another drawback is that several of the largest and most respected fund companies haven't signed onto either no-fee program. Such holdouts as Scudder, Vanguard, and T. Rowe Price want to maintain customer loyalty and feel Fidelity and Schwab make it too easy for people to hop from family to family. But they may have to come around. "We're watching this closely," says Steven Norwitz, vice-president at T. Rowe Price. "We haven't ruled it out forever."

Of course, while the no-fee programs leave out many top-performing funds, Schwab and Fidelity offer excellent lineups with good choices in all asset classes. Investors may find it easier to choose among hundreds instead of thousands of funds. "A way of limiting the number of funds and screening down to a more manageable search can be a blessing," says Phillips. Other seeming limitations are not so bad, either. For one thing, most people are glad to be rid of all the mailings from separate funds.

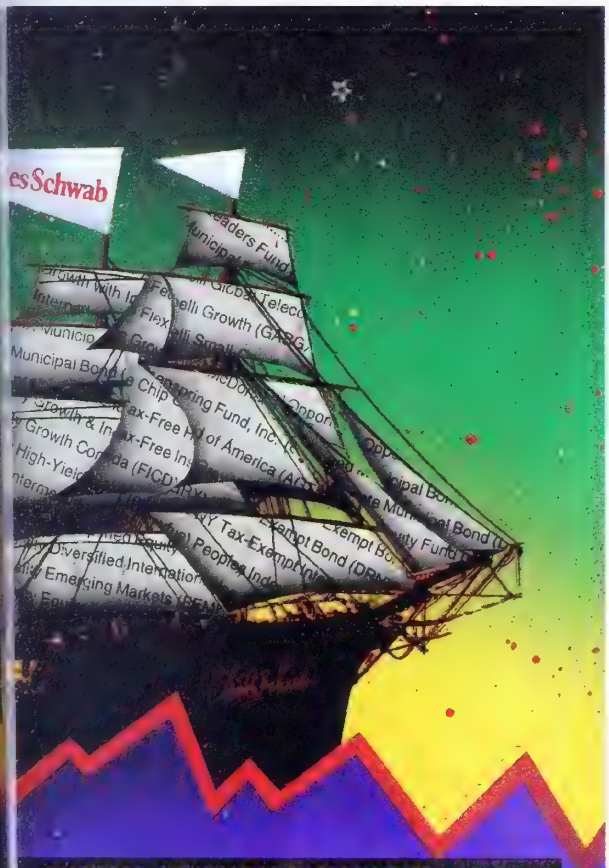
HOMEWORK REQUIRED. When choosing a fund, first decide on the asset category, says Maria Crawford Scott, editor of the *AAII Journal* of the American Association of Individual Investors. Then study the ones with the best long-term records. If one of the funds is included in the no-fee program, great. If not, you can probably still get it through Schwab and Fidelity. You just have to pay the fee—around $30 for a $5,000 no-load investment at Schwab, and $57.50 for a comparable purchase at Fidelity. Discount brokerages Jack White, Muriel Siebert, and Waterhouse Securities also have no-transaction fee programs. But these smaller companies don't have all the extras that the two giants offer.

For now, there is no clear victor in this contest between industry giants—except for the individual investor who can reap the benefits of their ever-improving programs. Let the battle rage on. *Amey Stone*

BROKERAGES SELLING NO-FEE FUNDS

Company	Number of Funds	Minimum Investment*
CHARLES SCHWAB (800 266–5623)	254	NONE
FIDELITY INVESTMENTS (800 544–9697)	327	NONE
JACK WHITE (800 323–3263)	377	$250
MURIEL SIEBERT (800 872–0666)	327	$5,000
WATERHOUSE SECURITIES (800 934–4443)	150	NONE

*Individual funds may have minimums DATA BUSINESS WEEK



CHARLES SCHWAB'S ONESOURCE

54 funds from 27 families with no transaction fees.

nch offices.

ual fee is waived for all individual retirement f more than $10,000.

ee quarterly mutual fund performance guide and "select" list of top-performing funds. Morningstar d on-line data are available for a fee.

ls not in program, the fee for purchases of less than s 0.6% of assets or a minimum of $29.

DATA: COMPANY REPORTS

Smart Money

GETTING TO KNOW A FUND BY ITS CLOSE KIN

What do mutual funds and baseball have in common? Statistics, for one. In fact, when the twice-monthly publication *Morningstar Mutual Funds* recently introduced a novel way to categorize and evaluate the funds it tracks, the inspiration came from sports historian Bill James, who likes to compare the stats on current baseball players with those of similar past players.

Morningstar decided to do the same thing with each fund it profiles by listing the three funds that have traits most like it. The information, which is available to the public through the *Morningstar Mutual Funds* booklets on file at many libraries, has several uses. It offers alternatives to funds closed to new investors. It can give a no-load substitute for a load fund. It can help you swap funds for tax purposes and provide insight into a fund's composition. Morningstar is the first fund-tracking company to offer this service, but Value Line plans to introduce a similar tool soon.

A fund's reaction to market forces, risk level, and returns are compared to those of 1,300 others, all at least three years old. The correlation between two funds is rated "strong," "fair," or "weak."

HOLD THE FORT. There are many ways to use the Most Similar Funds designation, which appears at the bottom right of Morningstar's full-page reports. Some successful funds, such as CGM Capital Development, with a three-year average annual return of 29.78%, are closed to new entrants. But by consulting the most-similar list, investors can see that AIM Constellation, with a 21.78% return, or Twentieth Century Giftrust Investors, with a 28.48% return, are fair fits for CGM. Likewise, if you favor Fidelity Magellan but think it has gotten too big, you might consider Fidelity Growth & Income, Neuberger & Berman Selected Sectors, and MFS Research A, all strong fits. If you're enamored of a fund that requires a high minimum investment or steep load, the similar-funds ranking can steer you toward alternatives.

The new ranking can also help you maintain your market position when realizing capital gains or losses. If you sell off part of a portfolio to claim gains or losses, you can immediately pick up a similar fund. This way, you get the tax advantage without violating the so-called wash-sale rule that requires investors to wait 30 days before buying back the same securities.

To diversify a portfolio, look for funds that have a low correlation with most others. A fund that has only weak fits is likely to behave differently from the other funds in your portfolio. For example, Merger Fund, which invests only in companies about to be bought or sold, may be a good choice "if you want to bring in an element that marches to a different drummer," says Don Phillips, publisher of *Morningstar Mutual Funds*. ASM, which invests in the 30 companies of the Dow Jones industrial average, is also unique. Most equity funds try to capture growth by holding stocks with smaller average market capitalizations than the big blue chips in the Standard & Poor's 500-stock index. ASM, however, holds even larger companies than those in the S&P.

THE RANKINGS MAY HELP INVESTORS SORT THROUGH THE PACK

Insight is also offered [on] fund's makeup. Fidelity [Capi]tal Appreciation's similar [to] Mackenzie American, [Fund] Worldwide Growth, and [Fund] International suggests [both] heavily invested in cyc[lical] as is Mackenzie, and in [gold] holdings, as are the other[s]. The fact that growth [funds] Colonial Shares and Com[monwealth] Sense Growth are Evergr[een] look-alikes implies that th[e] ter has grown from a [small] cap into a mid-cap fund.

Some experts think [the] new ranking can help [in]tors weed through the [over]grown fields of [funds] out there. "We ap[plaud] anyone providing [more] individual investors [with] more decision-ma[king] tools," says Paul G[ilbert]wood, an analyst [at] vestment consu[lting] Frank Russell Co. [But] it shouldn't be us[ed] isolation. You ha[ve] look at all the infor[ma]tion for that fund[,] find out why it's s[o] ing up as a strong[er]

STILL YOUNG. Wh[en] nancial planner [Jim] Young of First R[epub]cial Group teste[d] the rankings agai[nst] software program [that] shows how much [of] lap there is bet[ween] the individual secu[rities] in different fund[s] found a very low [cor]lation between [the] Morningstar liste[d] strong fits. "I [would] rely more on stocks be[ing] greater indicator of si[mi]ity, rather than correl[ation] statistics," he says.

Mark Riepe, vice-pres[ident] at consultant Ibbotson [Asso]ciates, says Morningsta[r is] yet to determine how [well] the correlations bet[ween] funds are over time. Pl[us] doesn't argue: "Fund[s] managed by individua[ls] sonalities with strategie[s] can change, so there is [a] ger is believing too mu[ch] numbers." Therefore us[e] most-similar choices only [as] starting point, and they [can] help you improve your[s] ting average. *Pam*

THE NEXT-BEST FUND?

FUNDS CLOSED TO INVESTORS		LIKE-FUND ALTERNATIVES	
JOHN HANCOCK SPECIAL EQUITIES A High risk, small-cap growth	28.06%*	AIM AGGRESSIVE GROWTH PUTNAM NEW OPPORTUNITIES A	27.56%* 28.49
BABSON ENTERPRISE Moderate risk, small-cap value	18.45	QUEST FOR VALUE SMALL CAP A SHADOW STOCK	18.10 14.65
HARBOR INTERNATIONAL Low risk, large-cap value	14.69	IVY INTERNATIONAL A T. ROWE PRICE INT. STOCK	15.75 12.77
STRONG COMMON STOCK Medium risk, mid-cap blend	23.87	VISTA CAPITAL GROWTH A	23.78
FUNDS WITH SALES CHARGES		**NO-LOAD ALTERNATIVES**	
AIM CONSTELLATION High risk, mid-cap growth	21.78%*	BERGER 100	21.92%*
AIM WEINGARTEN Low risk, large-cap blend	6.97	VANGUARD U.S. GROWTH	7.22
FIDELITY DESTINY I Low risk, large-cap blend	19.20	NEUBERGER & BERMAN GUARDIAN	15.64

*3-YR.AVERAGE ANNUAL RETURN THROUGH APR. 30, 1994

DATA: MORNINGSTAR INC.

AT&T BUSINESS ADVANTAGE

Cece Roycraft and her partner have been operating Key West Pro Dive for over twenty years. They spend most of their time thinking about the reliability of things like boats, scuba tanks and regulators. Or the unreliability of the winds, waters and weather.

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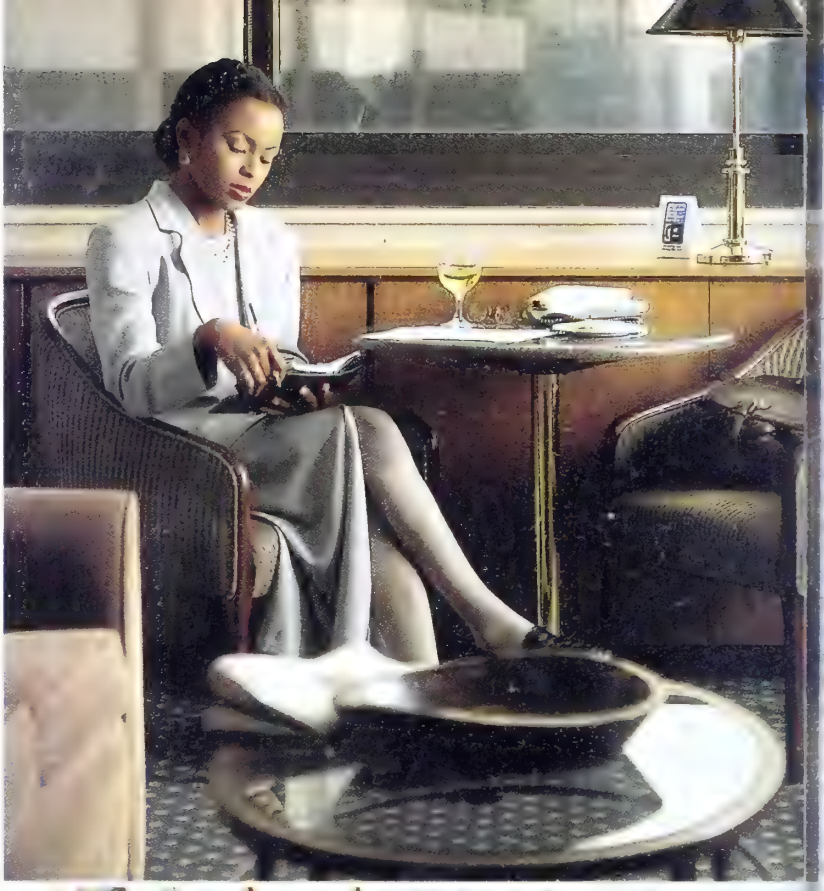
HOTELS

OUR WORLD REVOLVES AROUND YOU



Just a few of the ITT Sheraton Hotels in **North America: Delaware**: Sheraton Suites Wilmington. **Maryland:** Sheraton International at BWI, Sheraton Inner Harbor, Sheraton Ba[illegible] **Pennsylvania:** [illegible] Sheraton Plaza King of Prussia, Sheraton Society Hill Philadelphia, Sheraton University City Philadelphia, Sheraton Station Square/Pitt[illegible] **Virginia:** [illegible] Sheraton Crystal City Arlington, Sheraton Reston, Sheraton Premiere at Tysons Corner, Sheraton Suites Alexandria. **Washington, DC:** Sheraton Wash[illegible]

[illegible] 1994 ITT Sheraton Corporation

Housing

IT YOURSELF— T DO IT GREEN

) those for whom home mprovement is not a TV how but a way of life, s a new commandment: green. The latest mate- t building-supply stores arth-friendly, such as made from recycled . Power-tool jocks can ty flooring of wood sal- from old barns or e composed mostly shed light bulbs or red windshields.

many do-it-your- , environmentalism iew. Energy effi- became big during il crises of the As indoor air qual- came an issue dur- e past decade, less products appeared market. But these ends miss crucial They don't always ve resources. And lon't save embod- ergy—that is, the it takes to log or mine gypsum, s these materials mber or drywall, ally, transport the ts to your site.

INGLES. Growth in cal consciousness the American In- of Architects (AIA) ner builder organ- s to push the idea tainable architec- This nascent trend em- es recycled products, ction methods that cut on trash, and designs ll for less material.

simplest way to start ig your home may be recycled products in ext project. Nails from W. H. Maze come from melted-down cars. Rustic Shingles from Classic Products look like hand-split wood shakes but were once aluminum cans. Several companies make decking, landscape edging, and mailbox posts from recycled milk jugs. Others fashion plywood-like panels from cast-off straw, rice hulls, peanut shells, and newsprint. A half dozen companies are remilling wood from old Nebraska barns and Southwest homesteads.

Sometimes, the cost is a little more. At $4 a square foot, Traffic Tiles made of windshield glass run about $1 more than domestic tile. Glidden 2000 paint won't make a newly painted room smell like a chemical factory, but it does cost at least 5% more than your average latex.

HEALTH WOES. You're not likely to find everything at your local supplier. But stores dedicated to eco-building have opened, including Environmental Construction Outfitters in Manhattan (212 334-9659), Environmental Building Supplies in Portland, Ore. (503 222-3881), and Planetary Solutions in Denver (303 442-6228). For a mail-order catalog, call Shelter Supply (800 762-8399).

Also, several groups publish exhaustive listings of suppliers of everything from foundation cement to roof joists. *Guide to Resource Efficient Building Elements* ($25, 406 549-7678) focuses on items that conserve raw materials. You may want to ask your architect to look at the AIA's *Environmental Resource Guide* ($275 for nonmembers, $195 for members, 800 365-2724). Updated quarterly, it offers a wealth of technical information aimed at professionals. For example, roof or floor joists made of engineered wood I-beams use half the wood of traditional 4-by-12 or 2-by-8 lumber but are as strong.

Model homes integrating these techniques are going up around the country. In Missoula, Mont., the Center for Resourceful Building Technology built the 2,200-sq. ft. ReCraft 90 house with one-sixth the lumber that would go into a typical house. Other showcase homes, often sponsored by local utilities, have been built in Seattle, Phoenix, and Upper Marlboro, Md.

But these houses don't solve all the problems. "Some building products that are good for the environment aren't good for people," says Victoria Schomer, editor of *Interior Concerns Resource Guide* ($40, 415 389-8049). Engineered wood products, such as fiber board, are often glued together with formaldehyde-based glues that produce toxic gases. Carpet made from recycled plastic might make some people sick, as can some types of recycled insulation. You can put up foil barriers over your insulation and use products to seal your carpet, but these are only half-measures. "What we're working for," says Boston-area architect Andrew St. John, "is something that won't harm the earth and won't harm us." *Heather Millar*

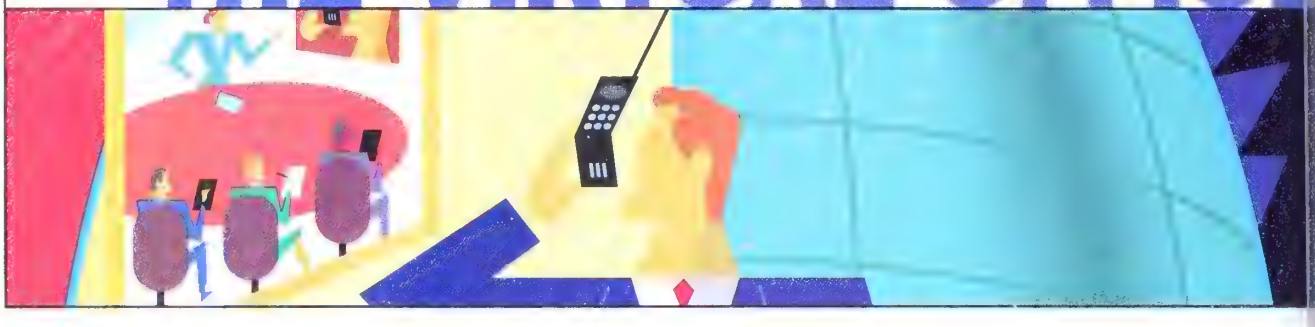
Vorth Noting

E INFO. Consumers Un- improved its service ls car buyers the exact ost of any new model. Now you can call a toll-free number, 800 933-5555, to get the information on the phone, faxed within four hours, or mailed. The report includes a comprehensive wholesale price breakdown for options. The cost is $11 for one report; $20 for two; $27 for three.

■ **TOT FUND.** SteinRoe's Young Investor Fund (800 403-5437) aims to educate kids—and parents—about investing. The no-load fund, which owns such companies as McDonald's and Walt Disney, issues a quarterly newsletter and annual report with special articles and games for kids. The minimum investment is $2,500, or $1,000 for a custodial account.

capability:executive programs

THE REALITIES OF THE VIRTUAL OFFICE



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Place: McGraw-Hill World Headquarters, New York City

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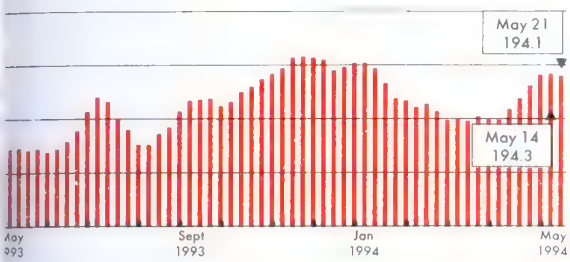
usiness Week Index

ODUCTION

e from last week: −0 1%
ie from last year: 3.7%

1967=100 (four-week moving average)

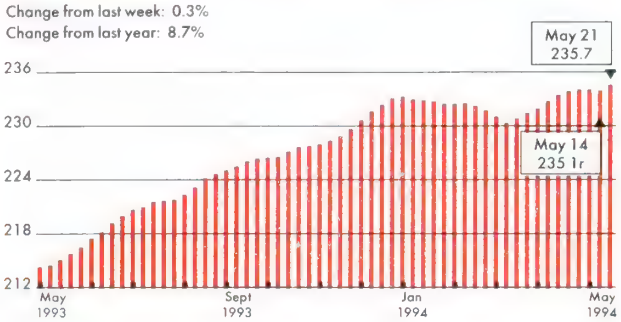


production index fell slightly during the week ended May 21. On a ially adjusted basis, output of trucks, steel, electric power, crude-oil refining, aperboard all declined. Auto, lumber, and paper production levels were all up y, while coal production and rail-freight traffic were unchanged from the us week. Before calculation of the four-week moving average, the production dropped to 193.6 from 194.2.

BW production index copyright 1994 by McGraw-Hill Inc

LEADING

Change from last week: 0.3%
Change from last year: 8.7%



The leading index rose during the week ended May 21, as the Federal Reserve's latest hike in short-term interest rates touched off rallies in the financial markets. Higher stock prices, lower bond yields, and faster growth rates for materials prices and M2 lifted the index. Data on business failures and real estate loans were unavailable for the week. Before calculation of the four-week moving average, the index increased to 237.4, from 236.4.

Leading index copyright 1994 by Center for International Business Cycle Research

DUCTION INDICATORS

	Latest week	Week ago	% Change year ago
5/28) thous. of net tons	1,973	1,903#	3.7
(5/28) units	137,765	114,842r#	9.2
S (5/28) units	150,606	119,975r#	69.0
IC POWER (5/28) millions of kilowatt-hours	56,752	54,695#	4.8
-OIL REFINING (5/28) thous. of bbl./day	14,144	13,986#	1.2
5/21) thous. of net tons	19,798#	19,931	7.4
OARD (5/21) thous. of tons	869.2#	859.1r	7.4
(5/21) thous. of tons	817.0#	791 0r	4.7
R (5/21) millions of ft.	484.8#	458.7	5 1
REIGHT (5/21) billions of ton-miles	22.6#	22.7	4 6

s: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, n Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association ican Railroads

REIGN EXCHANGE

	Latest week	Week ago	Year ago
SE YEN (6/1)	105	105	107
N MARK (6/1)	1.64	1.65	1.60
POUND (6/1)	1.51	1.51	1 54
FRANC (6/1)	5 61	5.64	5.39
IAN DOLLAR (6/1)	1.38	1.38	1.28
FRANC (6/1)	1.39	1.40	1 43
N PESO (6/1)[3]	3.323	3.295	3.122

s: Major New York banks. Currencies expressed in units per U.S. dollar, except for British xpressed in dollars

CES

	Latest week	Week ago	% Change year ago
6/1) $/troy oz.	386.300	387.300	4.7
CRAP (5/31) #1 heavy, $/ton	122.50	126 00	15.0
TUFFS (5/31) index, 1967=100	217.9	217.1	8 0
R (5/28) ¢/lb.	108.4	107 8	23.7
NUM (5/28) ¢/lb	64.5	64.5	24 0
(5/28) #2 hard, $/bu.	3.59	3.63	1.1
I (5/28) strict low middling 1-1/16 in , ¢/lb.	80 60	78.49	43.2

s: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* ansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (5/27) S&P 500	455.75	451.79	1.1
CORPORATE BOND YIELD, Aaa (5/27)	7.98%	7.89%	7.0
INDUSTRIAL MATERIALS PRICES (5/27)	101.5	100.9	6.2
BUSINESS FAILURES (5/20)	NA	NA	NA
REAL ESTATE LOANS (5/18) billions	NA	$425.7	NA
MONEY SUPPLY, M2 (5/16) billions	$3,556.0	$3,553.1r	2.4
INITIAL CLAIMS, UNEMPLOYMENT (5/14) thous	367	381	7.9

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
PERSONAL INCOME (Apr.) annual rate, billions	$5,655.8	$5,630.7r	5.4
CONSUMER SPENDING (Apr.) billions	$4,595 3	$4,602.1	6.0
CONSTR. SPENDING (Apr.) annual rate, billions	$508.5	$505.4r	13 2
PURCHASING MANAGERS' INDEX (May)	57.7%	57.7%	13.6

Sources: Commerce Dept., Census Bureau, National Association of Purchasing Management

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (5/16)	$1,143.5	$1,142.5r	7.1
BANKS' BUSINESS LOANS (5/18)	292.0	292.0r	5.2
FREE RESERVES (5/25)	611	630r	−44.3
NONFINANCIAL COMMERCIAL PAPER (5/18)	154.8	155 1	−2.9

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (5/31)	4 60%	4 19%	3.09%
PRIME (6/1)	7.25	7.25	6.00
COMMERCIAL PAPER 3-MONTH (5/31)	4 60	4.55	3.23
CERTIFICATES OF DEPOSIT 3-MONTH (6/1)	4.51	4.49	3.21
EURODOLLAR 3-MONTH (5/27)	4.49	4.53	3.20

Sources: Federal Reserve, First Boston

ata in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
ern Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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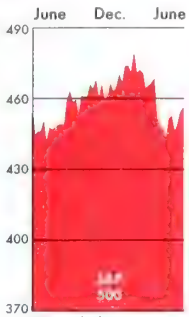
vestment Figures of the Week

ENTARY

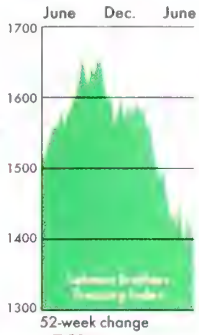
ks were little changed in r trading this week. Ditto ury bonds and corpo- e big news was on the ity front, where a jump in soybean prices pushed modity Research Bureau arply higher. This trig- lation fears and kept in- n the sidelines, despite l the economy was slow- . The story was quite dif- Tokyo, with the Nikkei ris- y to set a 1994 high.

STOCKS



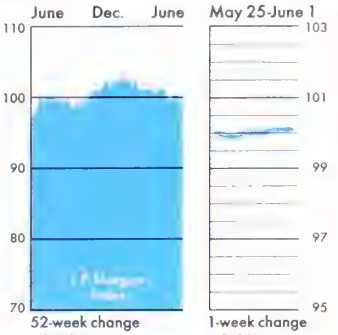
52-week change +0.8%
1-week change +0.3%

BONDS



52-week change −7.3%
1-week change −0.3%

THE DOLLAR



52-week change +3.4%
1-week change +0.1%

KET ANALYSIS

CKS	Latest	% change Week	52-week
IES INDUSTRIALS	3760.8	0.1	5.8
COMPANIES (S&P MidCap Index)	171.6	0.6	2.5
MPANIES (Russell 2000)	250.1	0.7	6.9
ANIES (Russell 3000)	263.7	0.4	1.5

N STOCKS	Latest	% change (local currency) Week	52-week
(FINANCIAL TIMES 100)	2931.9	−2.9	2.4
IIKKEI INDEX)	21,053.1	1.9	1.7
(TSE COMPOSITE)	4289.7	0.0	11.1

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.25%	4.26%	3.13%
30-YEAR TREASURY BOND YIELD	7.38%	7.36%	6.88%
S&P 500 DIVIDEND YIELD	2.80%	2.79%	2.75%
S&P 500 PRICE/EARNINGS RATIO	20.2	20.1	22.9

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 200-day moving average	461.9	461.8r	Negative
Stocks above 200-day moving average	34.0%	33.0%r	Positive
Speculative sentiment: Put/call ratio	0.40	0.35	Neutral
Insider sentiment: Vickers sell/buy ratio	1.11	1.48	Positive

STRY GROUPS

BLOOMBERG FINANCIAL MARKETS

NTH LEADERS	% change 1-month	12-month	Strongest stock in group	% change 1-month	12-month	Price
GRAPHY IMAGING	11.8	NM	EASTMAN KODAK	13.0	13.4	46 7/8
INE INSURERS	9.6	4.5	CIGNA	17.7	16.7	68 7/8
	9.4	−8.8	SYNTEX	51.6	12.1	23 1/8
CENTER BANKS	8.4	16.7	BANKAMERICA	12.1	8.7	48 1/2
TER SOFTWARE	8.4	19.5	COMPUTER ASSOCIATES INTL.	28.6	47.4	41 5/8

NTH LAGGARDS	% change 1-month	12-month	Weakest stock in group	% change 1-month	12-month	Price
UILDING	−12.7	−18.5	CENTEX	−14.5	−23.2	24 3/8
CO	−9.0	−3.5	PHILIP MORRIS	−9.6	−2.2	49 1/4
UNICATIONS EQUIPMENT	−8.6	−11.8	DSC COMMUNICATIONS	−25.8	4.1	22 1/4
NES	−7.7	−16.7	GIDDINGS & LEWIS	−12.9	−5.4	22
ES	−7.5	−23.1	USAIR GROUP	−16.9	−68.6	6 3/4

UAL FUNDS

MORNINGSTAR INC

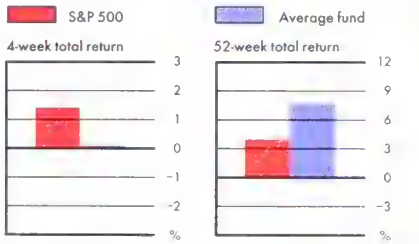
total return	%
NT	6.1
ESSIVE AGGRESSIVE GROWTH	6.0
Y SELECT HEALTH CARE	5.9

otal return	%
ER LATIN AMERICA	56.9
L LYNCH LATIN AMERICA A	50.6
R INTERNATIONAL GROWTH A	46.5

LAGGARDS

Four-week total return	%
FIDELITY SELECT SOFTWARE & COMPUTER	−10.1
KEYSTONE AMERICA HARTWELL EMERG. GR. B	−9.3
STRATTON MONTHLY DIVIDEND	−6.6

52-week total return	%
MONITREND GOLD	−34.8
PILGRIM CORPORATE UTILITIES	−21.8
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−20.7



TIVE PORTFOLIOS

DRI/McGRAW-HILL

nounts
t the present
$10,000
one year ago
ortfolio

jes indicate
otal returns

Foreign stocks	Gold	U.S. stocks	Money market fund	Treasury bonds
$11,972	$10,504	$10,340	$10,202	$10,126
−0.57%	+0.30%	+0.73%	+0.04%	−0.03%

this page are as of market close Wednesday, June 1, 1994, unless otherwise indicated. ups include S&P 500 companies only; performance and share prices are as of market close May 31. Mutual fund returns are as of May 27. Relative portfolios are valued as of May 31. A more detailed explanation of this page is available on request. r=revised NM=Not meaningful

NEW RULES FOR A NEW BROADCASTING WORLD

The U. S. broadcasting landscape is changing fast. Fox Broadcasting Co.'s coup in pulling 12 TV affiliate stations away from CBS, NBC, and Capital Cities/ABC quickly alters the playing field for all the networks. Now, there are four "nets," but they are not all playing by the same rules. It's time for the government to reexamine the regulations that govern the broadcast industry. The marketplace has made many obsolete (page 30).

Under existing rules, networks are not allowed to own studios that sell programming to other distributors, such as cable. As a result, they can't generate revenues from syndication—reruns of popular old shows—which is a mammoth moneymaker.

But Fox can. This "nearly network" is still not officially defined as a network by the Federal Communications Commission because it offers only 15 hours of programming a day, compared with 22 from CBS, NBC, and ABC. Fox's Twentieth Century Fox studio is a major film producer (*Mrs. Doubtfire* and *Home Alone*) as well as a prodigious maker of TV shows (*The Simpsons*, *L. A. Law*, and *M*A*S*H*).

Rupert Murdoch, the head of Fox, also changed the broadcast playbook by not buying the stations outright. He invested $500 million in return for a 20% stake in New World Communications Group Inc., owned by Ronald O. Pearlman. As part of the deal, he received access to the television sta

The three networks have been operating under strict ernment regulations over station ownership. The Fo essentially circumvents those limits.

Finally, there is the issue of foreign ownership. Alt Murdoch is an American citizen and Fox is 70% own Murdoch, his overall holding company, News Corp., i tralian. Thus, the ownership remains unclear, and Fo may be the first foreign-owned network in U. S. histo

With all these changes going on, FCC Chairman Re Hundt has a lot of work cut out for him. What should The explosion of technology and the expansion of dis tion outlets make past restrictions archaic. New glob dia configurations are in the making, and the gover should help, not hinder, their development.

If Fox can own a studio, certainly the other nets be allowed to create and sell programming and rece nancial benefits from syndication. If Fox can get acces many as 12 stations by an indirect investment, so shou other networks. And if the marketplace says there is for a fourth network, then its ownership, in this par case, is not important. Rupert Murdoch changed the cast scene very quickly. The challenge is for Reed Hu move just as fast on the regulatory front.

A FOUR-STEP PLAN TO REFORM WELFARE

It's showdown time for welfare reform. After decades of angry partisan debate, the Clinton Administration is on the verge of sending a "two years and work" reform package to Congress. With welfare rolls swelling and with more children being born out of wedlock and into poverty every year, the time is long since past when serious welfare reform should have been addressed (page 58).

But the Clintonites are flinching just when they should be fighting. The chance of passing major social legislation is being lost by political compromises. Too bad. A little political backbone at the White House on four issues could help end the culture of poverty:

■ **TWO YEARS AND WORK.** This, the heart of the Clinton proposal, is under attack as being too harsh. There are calls to extend it to three or more years, expand the number of women "unable" to work, or dump the time limit entirely.

"Tough love" is the call here. Clinton should insist on a strict series of financial rewards and penalties to encourage training, job placement, and child support. Without this discipline, welfare reform can't work.

■ **JOBS.** Welfare reform is under attack as too expensive. Opponents say that millions of public-service jobs will be needed because welfare mothers can't get private employment.

That's nonsense. Immigrants from Latin America, Africa, and Asia are driving cabs, cutting lawns, washing dishes, serving food, and helping the elderly all over America. past year alone, 500,000 jobs have been created in ret 300,000 in health care, and 200,000 in restaurants an

Welfare bureaucrats may not know where these ent el private-sector jobs are or how to find them. But a cum of job training and a serious job search could c most of those on welfare to the world of work.

■ **FINANCING.** Day care is essential if work is to repla fare. Nearly all recipients of Aid to Families with Dep Children are young women with children.

This will cost real money, but it is money that sho spent. The Clinton Administration has been wimping a second round of major federal spending cuts. Trimmi ricultural subsidies and cutting back on unneeded electrification could generate far more than the $9.5 the Administration is proposing to finance its progra

■ **STATE WAIVERS.** There is a desire among many in Co for top-down federal control over welfare reform.

The Administration should resist such control and ue to grant waivers to states willing to experiment. such as New Jersey, are trying to keep welfare mother having more children by reducing or cutting off payn

These four steps might not end welfare as we kn But they would make a significant difference. This is time for Washington to punt.

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Yes

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Noway!

Yes

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Yikes

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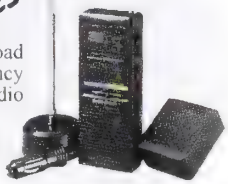

Road Emergency CB Radio

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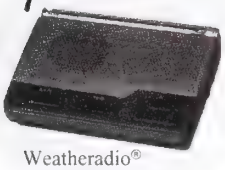

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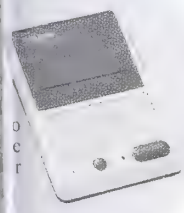

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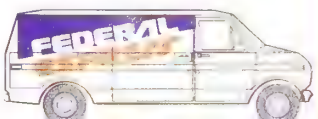

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SPECIAL MIDYEAR OUTLOOK

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June 20

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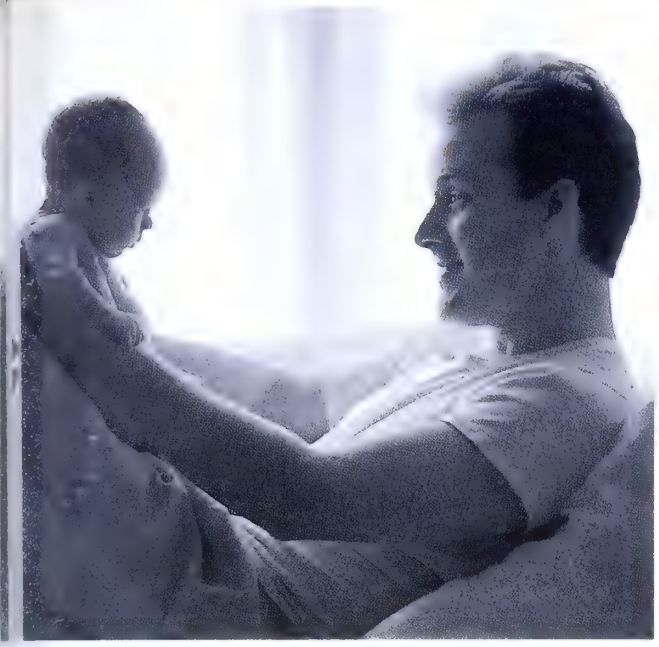

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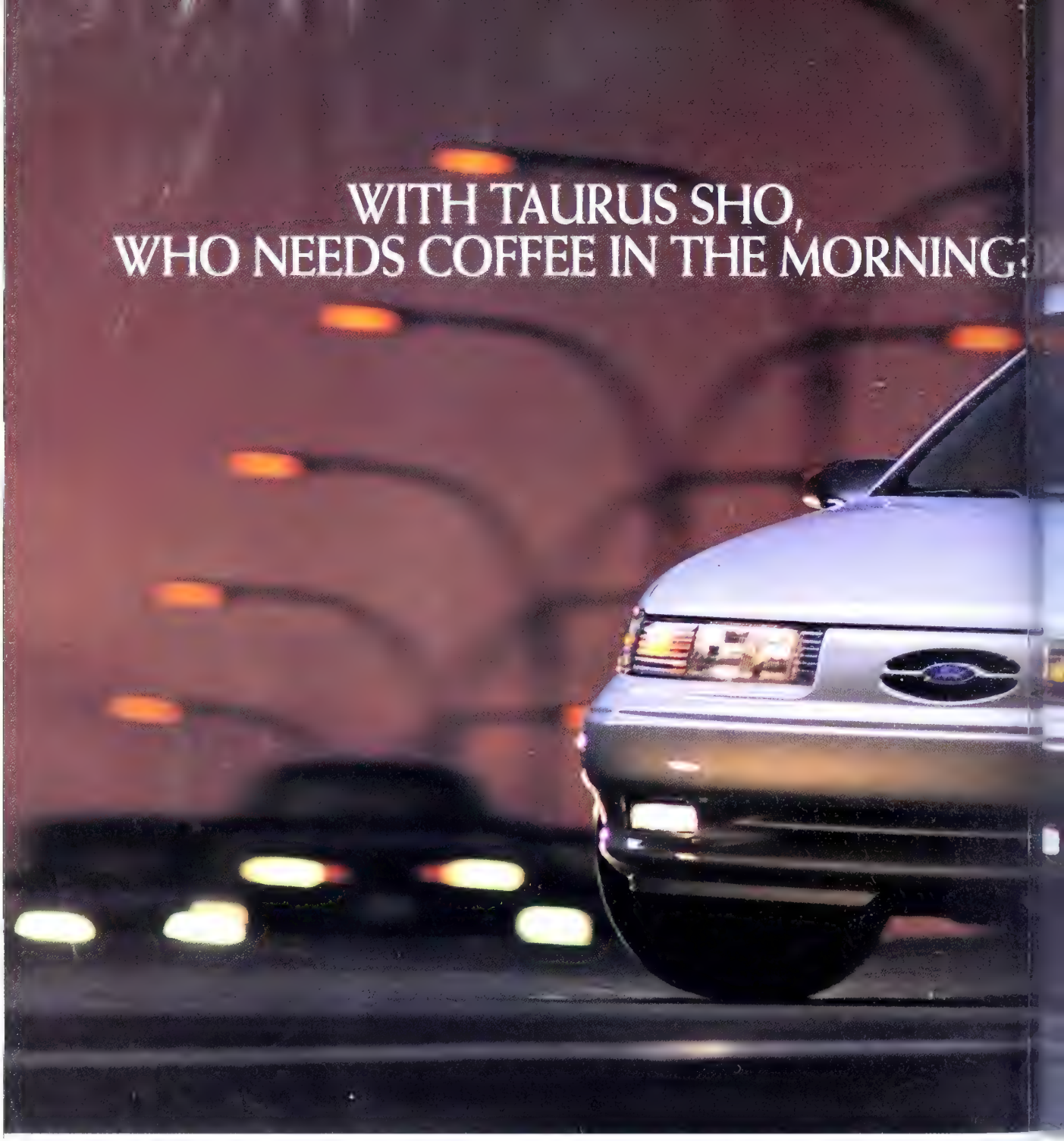

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SHO's sleek good looks are a subtle hint at the power that lies within. Then, behind the wheel you'll notice that the driver-oriented instrumentation and articulated bucket seats are designed so your attention stays on the road.

)PENING PERFORMANCE.
s 220-horsepower eye-
er will turn your commute
he ideal way to enjoy speed-
tive variable-assist steering
he newly refined four-wheel
-tuned suspension. And since
ower of SHO's 24-valve DOHC engine is balanced by a standard anti-lock braking system and dual air bags,** you'll be able to concentrate on a world-class driving experience.

Awaken the performance driver within. Ford Taurus SHO. Your commute will never be the same.

HAVE YOU DRIVEN A FORD LATELY?

Ford

*Based on 1993 CY manufacturer's reported retail deliveries
**Always wear your safety belt

NUMBER 3377

BusinessWeek

JUNE 2, 199

IF INVESTING WERE A SIMPLE ART, WE'D ALL BE MILLIONAIRES AND WOULDN'T NEED THIS GUIDE TO SURVIVAL AND SUCCESS IN THE SECOND HA

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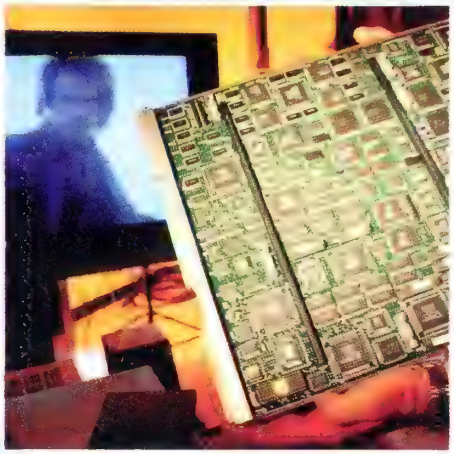

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Even the President's standing with high-tech honchos is in danger

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Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

TALK SHOW

It won't hurt me in '94, and I can put enough into [illegible] and '96 to crawl through to reelection.

—Bill Clinton on the demise of his 1993 job-creation plan, as quoted in Bob Woodward's *The Agenda*

EXECUTIVE SWEETS

PLUSH SEATS WITH PLENTY OF FRINGE

Wanted: Distinguished person to serve on corporate board. Exl. benefits, generous pension, travel, all expenses paid. Just two hours a week! Pay up to six figures!

The pay of corporate directors is, according to shareholder activist Nell Minow of the Lens Fund, "the last dirty secret." Although Korn/Ferry International reports that directors work only an average of 103 hours a year, the average retainer—the base pay—has increased in recent years, to $20,929 in 1993. But there's much more (table).

Many companies also award directors extra stock options and hefty additional fees for chairing committees or attending meetings. And after just three years of service, many are awarded a generous pension, which can double their pay as active directors.

BUSINESS WEEK took a look at the companies with the largest retainers, as tracked by Directorship Database.

DIRECTORS' PAY: SOME LEADERS

DIRECTOR/COMPANY	BASE PAY	ACTUAL PAY
John Clendenin, RJR NABISCO	$50,000†	$161,000*
Thomas Kean, AMERADA HESS	$50,000	$145,000
Edward Meyer, ITT	$42,000†	$134,000
Richard Furlaud, AMERICAN EXPRESS	$64,000†	$105,900
George Beitzel, BANKERS TRUST	$51,869†	$80,869
Edgar Woolard Jr., IBM	$55,000†	$65,925

*INCLUDES ESTIMATED STOCK-OPTION VALUE
†SOME PAY WILL CONTINUE VIA PENSION, UPON LEAVING BOARD
DATA: COMPANIES' 1994 PROXIES, BACHELDER GROUP, DIRECTORSHIP DATABASE

Former New Jersey Gov. Thomas Kean managed almost to triple the $50,000 base pay he got in 1993 at Amerada Hess. "We ask a lot," says a Hess spokesman, a widely shared response. At American Express, Richard Furlaud, who acted as chairman for five months last year, raked in an extra $212,384 worth of stock options for his trouble, on top of the $105,900 he was already getting as a director. Other AmEx directors did even better. Henry Kissinger hit the company with $350,000 in consulting fees.

At RJR Nabisco, controlled by Kohlberg Kravis Roberts, KKR partners hold 7 of the 11 outside board seats, paying $50,000. Plus, KKR pockets $10 million a year for "management, consulting, and financial services."

So what kind of pay do activist shareholders like? The one that Sandy Weill has enacted at Travelers: Directors get $75,000 in stock—no cash, no extra meeting fees, no pension plans. *Elizabeth Lesly*

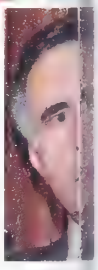
HONCHOS

ICAHN'S LATEST TAKEOVER: NEXT DOR

American Express' [illegible] penthouse condo [illegible] Manhattan's Museum of [illegible]ern Art is the stu[illegible] dreams: 5,000 square [illegible] marble bathrooms, teak [illegible] servants galore. A[illegible] bought it in 1986 so the [illegible] James Robinson, who liv[illegible] a Connecticut estate, [illegible] weekday pied-à-terre [illegible] spot for official entertai[illegible]

Although Robinson pa[illegible] company rent—$157,0[illegible] 1992—it didn't begin to [illegible] costs. AmEx shelled ou[illegible]

ROBINSON: *Last resident*



ICAHN: *What a e[illegible]*

million to buy the condo, plus $1 million in improvements and $200,000-plus in yearly operating costs. After Robinson's ouster in early 1993, the place [illegible] guished unsold in New Y[illegible] blah real estate mar[illegible] AmEx steadily droppe[illegible] $5.5 million asking price.

Well, now there's a b[illegible] Financier Carl Icahn, [illegible] owns an adjoining penth[illegible] has agreed to pick it up [illegible] bargain $3.2 million. A [illegible] son close to Icahn say[illegible] likes Robinson's Hudson [illegible] view—and may join the[illegible] apartments or sell his old[illegible] Neither would comm[illegible] AmEx would only con[illegible] that it had found a buye[illegible]

BROADCAST NEWS

IS FOX FOREIGN? DON'T BE SO SURE

Don't worry, Rupert, about that Federal Communications Commission inquiry into charges that your emerging fourth TV network violates limits on foreign ownership. To the distress of Rupert Murdoch's enemies, particularly CBS, a top FCC official says that the allegation is a "nonstarter."

UNBOWED: *Fox may well prevail*

Murdoch, an Australian-born U. S. citizen, paid $510,000 in 1985 for 51% ownership of six Metromedia stations, which became affiliates of his Fox Broadcasting. Murdoch-controlled News Corp., based in Sydney, paid $1.6 billion for just a 24% share. But then, the NAACP, pushing for African-American station ownership, complained to the FCC earlier this year. CBS, upset about its recent loss of pro football and affiliates to Fox, seems gleeful.

Word at the FCC, though, is that it's not necessarily in the public interest to zap Fox by making it sell its stations. And the feds likely won't even act on the foreign-ownership question. *Mark Lewyn*

TAX DOLLARS AT WORK

JOIN THE INS, SEE THE WORLD—ON A CRUISE

It's not a bribe. It's the Love Boat. A Justice Dept. Inspector General's audit says U. S. cruise-ship lines let Immigration & Naturalization Service inspectors take their families and pals on trips to Caribbean or Mexican ports for free or for as little as $10 each per day.

Usually, inspectors travel on a ship's round-trip voyage to prevent stowaways from sneaking into the U. S. But Justice says that, on 15% of 1992 cruises it surveyed, inspectors brought along guests. Some distracted agents even did their inspections before the ship left a foreign port, potentially letting illegal aliens slip aboard. The INS says it will tighten procedures, but Representative Gary Condit (D-Calif.) calls for firing culprits. To date, just one INS employee has been axed. *Richard S. Dunham*

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Up Front

SHOW BIZ

IS SNOW WHITE GONNA BE LIZARD LUNCH?

Flesh-eating dinosaurs square off against the housemother of seven diminutive eccentrics this fall at video-rental stores everywhere. Hollywood expects the video releases of MCA/Universal's *Jurassic Park* and Walt Disney's *Snow White & the Seven Dwarfs* will generate mind-boggling sales—and outpace the all-time champ, Disney's *Aladdin* (24 million copies sold since its late-1993 release). Both companies, says David Davis, an analyst with Paul Kagan, have "deep pockets and blockbuster films."

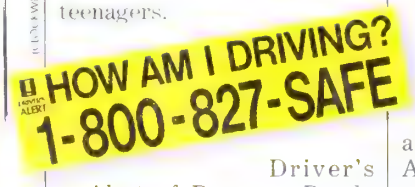
Jurassic Park, with the biggest-ever movie box office ($900 million worldwide), benefits from a monstrous promotional blitz. The *Jurassic* hype is being billed in the industry as the record for a video: $65 million, including $35 million on TV advertising. There are such tie-ins as Jell-O Jiggler molds in the shape of tiny saurians, courtesy of Kraft General Foods; Jell-O buyers get a $5 rebate on the video. Also hyping the video: McDonald's and Kenner Toys. MCA/Universal Home Video vows that some 98% of the U. S. population will see a dino promo an average of 25 times by Christmas.

Typically closemouthed, Disney won't say what it will spend on *Snow White*, but it's safe to say: less. Still, the *Snow*-job won't be shabby. Buyers of Pillsbury and Mattel products also can get a $5 rebate for the video. One big advantage: The movie is a classic beloved by parents. One possible drawback for *Jurassic Park* is that it is scary, which could hold down family sales. Yet *Snow White*, the first animated feature ever, was made way back in 1937 and last year did just a modest $41 million in tickets when it was rereleased on the wide screen. *Larry Armstrong*

RAT PATROL

LITTLE JOHNNY HAS THE PORSCHE? DON'T WORRY

Ever noticed those "How Am I Driving?" bumper stickers on commercial trucks? They give you an 800 number to call if the answer is: lousy. Well, the sticker outfit is soon bringing out a version for teenagers.



Driver's Alert of Pompano Beach, Fla., will have operators standing by to relay reports of youthful motoring malfeasances to parents, who will pay $20-$59 per year. Otherwise, says company President John DiPrato, parents may not even hear about traffic tickets "until the next year when their insurance rates go up." Elderly drivers can sign up, too.

Of course, young drivers aren't thrilled by the idea. Notes 18-year-old Maria Fleites of Coral Gables, Fla.: "There are so many bad drivers out there" who aren't teens. Driver's Alert, which has 3,000 commercial clients, tried to break into the teen market three years ago without success. This time, it hopes to do better by enlisting insurers to grant discounts of 5% or so to clients. *Fernando Battaglia*

DRAWN AND QUARTERED

BIG BLUE'S BLUES

IBMers MAY BE MISSING SOME LINKS

It's not just mainframe computers that IBM has been forced to give deep discounts on. The company is unloading a country club for employees—one of three in the U. S.—for $12.7 million, well under the $20 million asking price. The wealthy village of Sands Point, N.Y., plans to buy the swanky 208-acre club on Long Island Sound for use of the locals—with its 39,000-square-foot mansion, nine-hole golf course, eight tennis courts, two softball fields, hiking trails, and beach.

The club, bought in 1952, was on the market for six months. Buyers, typically developers, were scarce since new zoning hiked minimum lot sizes two to five acres. It cos million a year to maintain ers pay $25 yearly per family member.

Other excess IBM prop its Manhattan skyscr which real estate source

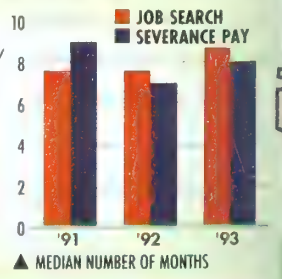
FOR SALE: *IBM's Long Island cou*

went for one-third less its $300 million asking p It will keep the other clubs—in Endicott and Po keepsie, N.Y.—but let ou ers join for annually. *Ira S*

THE BIG PICTURE

STRETCHING IT

It's taking longer for ousted senior executives to find new jobs. Severance packages, which used to cover their unemployment, have shrunk—to the point where benefits now run out before new jobs show up.



DATA: DRAKE BEAM MORIN INC.

FOOTNOTES

New employees landing jobs through personal contacts, 1993: **62%**. Through ads: **13%**

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Readers Report

ELECTRIC CARS: THE BUZZ IS FAVORABLE

I don't know anyone who would be foolish enough to buy an El-Jet, Consequento, Tropica, Electricar pickup, or even the Ecostar ("Electric cars," Cover Story, May 30).

We must first rid California of all cars over 15 years old and run emission tests each year after a car reaches five years. See what these results bring before trying this asinine requirement for electric cars in 1998.

Hugh Bogen
Newbury Park, Calif.

Your article was an interesting saga of the difficulty of covering any distance with electric cars, but it seemed to miss the point. What prevents battery-powered electric cars from being immediately practical is not any technological problem. It is only a lack of service facilities.

All we have to do is design electric cars with quickly interchangeable battery packs. Gasoline stations, renamed "electricity stations," could swap batteries in less time than it takes to fill a tank.

Service station networks would own the batteries, and the cost of the battery divided by its expected lifetime would be factored into the watt-hour charge for the battery swap.

Robert Jesu
Rye, N

Look in the attic (or basement) for a copy of *Tom Swift and his Electric Runabout: Or the Speediest Car on the Road*, which was published some years ago.

It's all there. Thomas Swift of Shelton, N.Y., was years ahead of us all.

Richard N. Mor
Louis

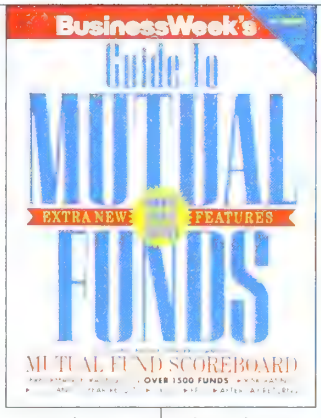
The hybrid car would cost much less than an electric car. The combustion engine can be an enlarged turbocharged delivering 20 kw at constant speed and will run clean on liquefied gas. California's utopian search for the 100% c

EDITOR'S MEMO

MUTUAL-FUND EXTRA: READ ALL ABOUT IT

This issue provides what has become one of our most popular features, the midyear update of Where to Invest. Together with our Where to Invest issue at the end of the year, it is our most comprehensive coverage of the investment environment: economic performance, the stock market, mutual funds, bonds, and various other financial investments. Among that broad spectrum of investment vehicles, mutual funds seem to generate the most reader interest.

For those fund fans who want more information, there's help: the latest edition of the book version of Business Week's Guide to Mutual Funds. It has informative commentaries by Senior Writer Jeffrey M. Laderman on the basics of mutual fund investing as well as such things as matching your goals with various funds. The book, which costs $14.95, also includes the latest innovations in our distinctive fund ranking such as aftertax returns and an assessment of each fund's investment style. Check your local bookstore or call 800 2MC-GRAW. Happy investing.



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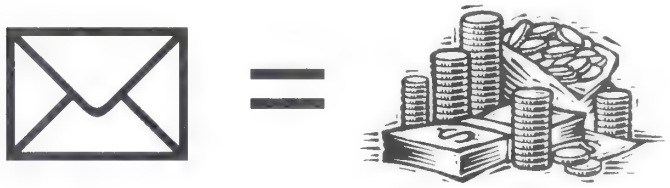

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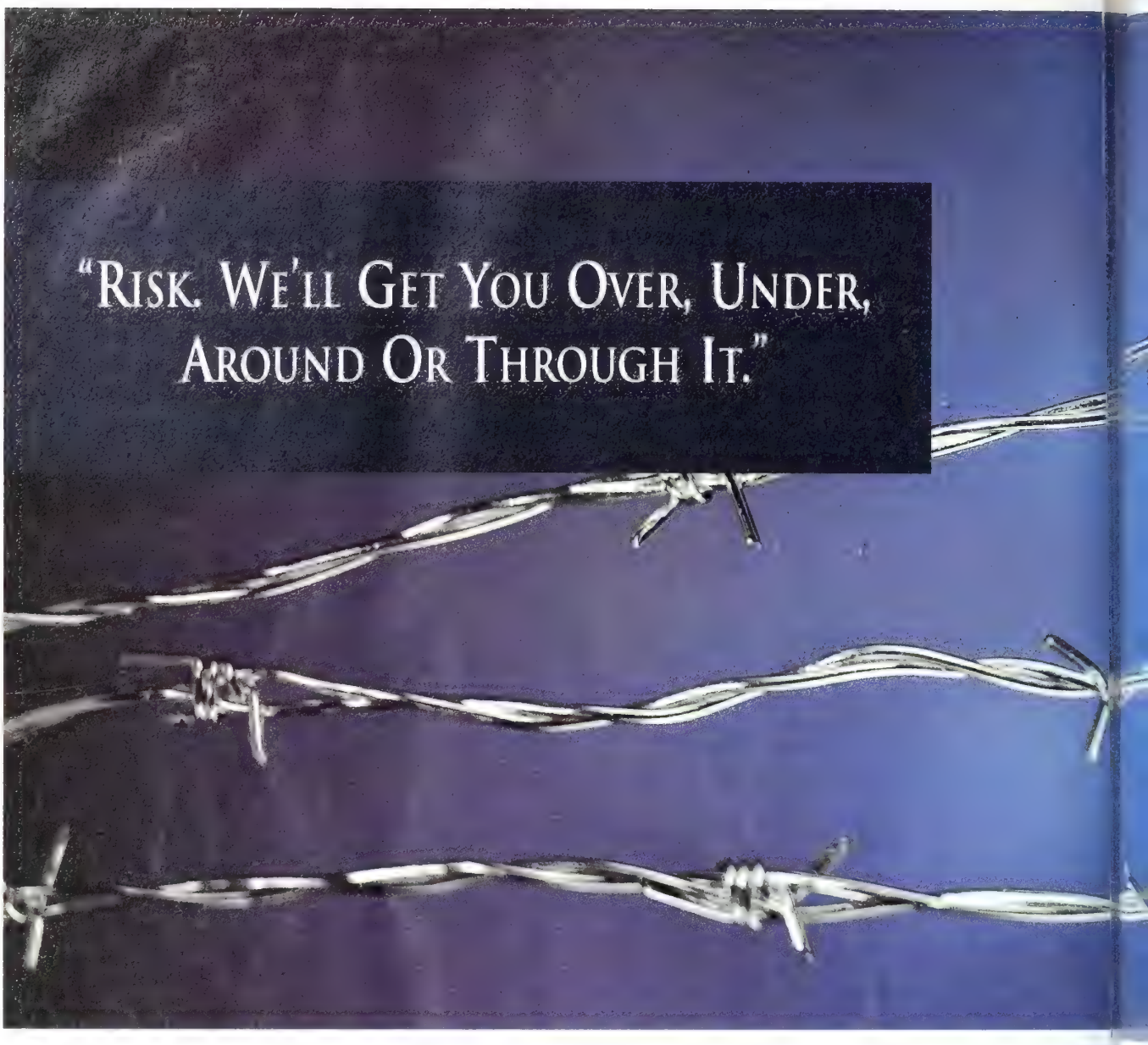

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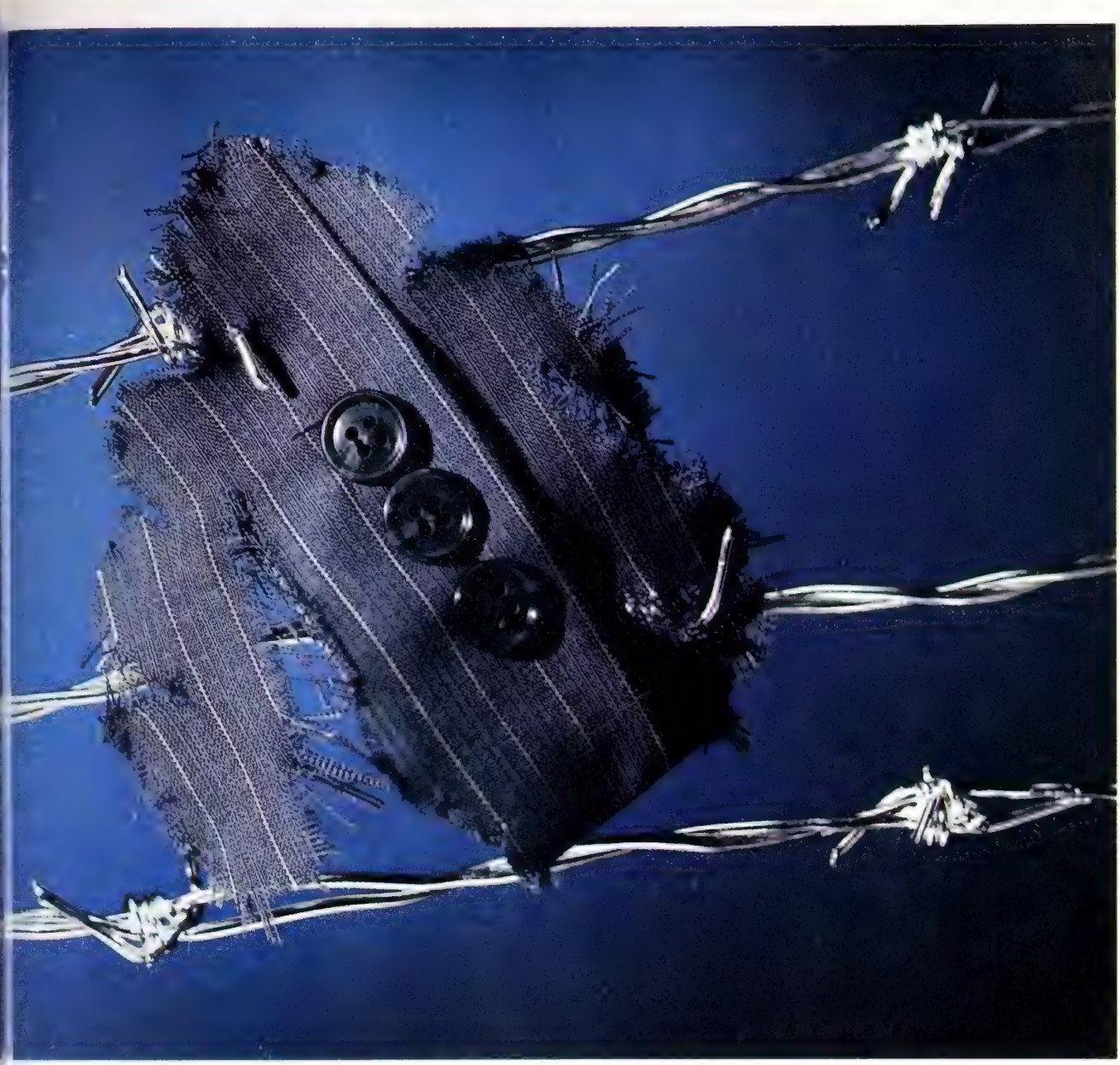

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car has carmakers barking up the wrong tree, and as a result, even less research and development has been done on the hybrid.

André R. Teissier-duCros
Atlanta

VIETNAM'S SCHOOLS NEED A CRASH COURSE

In reference to your article "Rising from the ashes" (International Business, May 23), I certainly agree with Peter Engardio's assessment of Vietnam's aging infrastructure and stifling bureaucracy. But he has made an oft-repeated error in describing Vietnam's educational system. Far from being one of Vietnam's greatest assets, it's a serious threat to the country's well-being.

Vietnam's school system was destroyed by long years of communist-style economic strategy that didn't work. The withdrawal of financial support by the U. S. S. R. was a serious blow to an ever-deteriorating infrastructure, and the school system was a predominant victim. Hanoi considers its near-collapse a major concern.

To their credit, political leaders in Hanoi have recognized the seriousness of the problem and are asking for help. The World Bank has just granted loans of up to $72 million for the rebuilding of schools throughout the countryside. The Asian Development Bank has promised an additional $70 million. Furthermore, the Business Alliance for Vietnamese Education is raising $20 million to redesign curriculum and modernize textbooks and teaching materials. These future infusions will be heartily welcomed and taken as a good indication of Vietn seriousness in making a play to join fortuitous group of Asian tigers.

Barbara Ste
Dir
Business Allianc
Vietnamese Educ
New

CORRECTIONS & CLARIFICATIONS

"'This is Captain Ferguson, please hang on to your hats,'" (People, May 23) should not have said that Frank A. Lorenzo was the ousted CEO of Continental Airlines Inc. Lorenzo stepped down after selling his stake in what was then Continental Airlines Holdings to Scandinavian Airlines System.

In "The Best Small Companies" tables (Hot Growth Companies, May 23), the correct phone number for Brooktrout Technology is 617 449-4100; also, Catalina Marketing is located in St. Petersburg, Fla., and its phone number is 813 579-5000.

BIG BLUE THROUGH ROSE-COLORED GLASSES?

I think you have been taken for a by IBM in "The few, the true, the (Information Processing, May 30). rhetoric of IBM's current remodelir the sales operation sounds an awfu like the myth we fostered among selves—and customers—while I w salesman with the company during 1970s.

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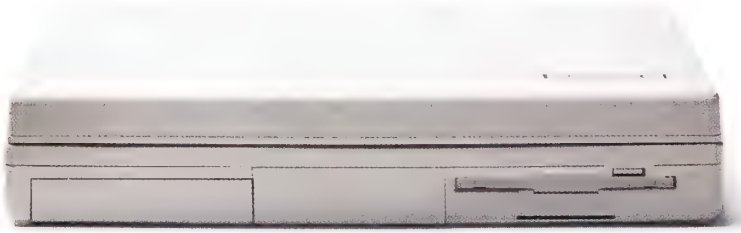

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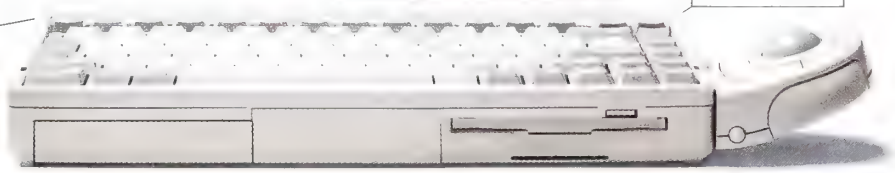

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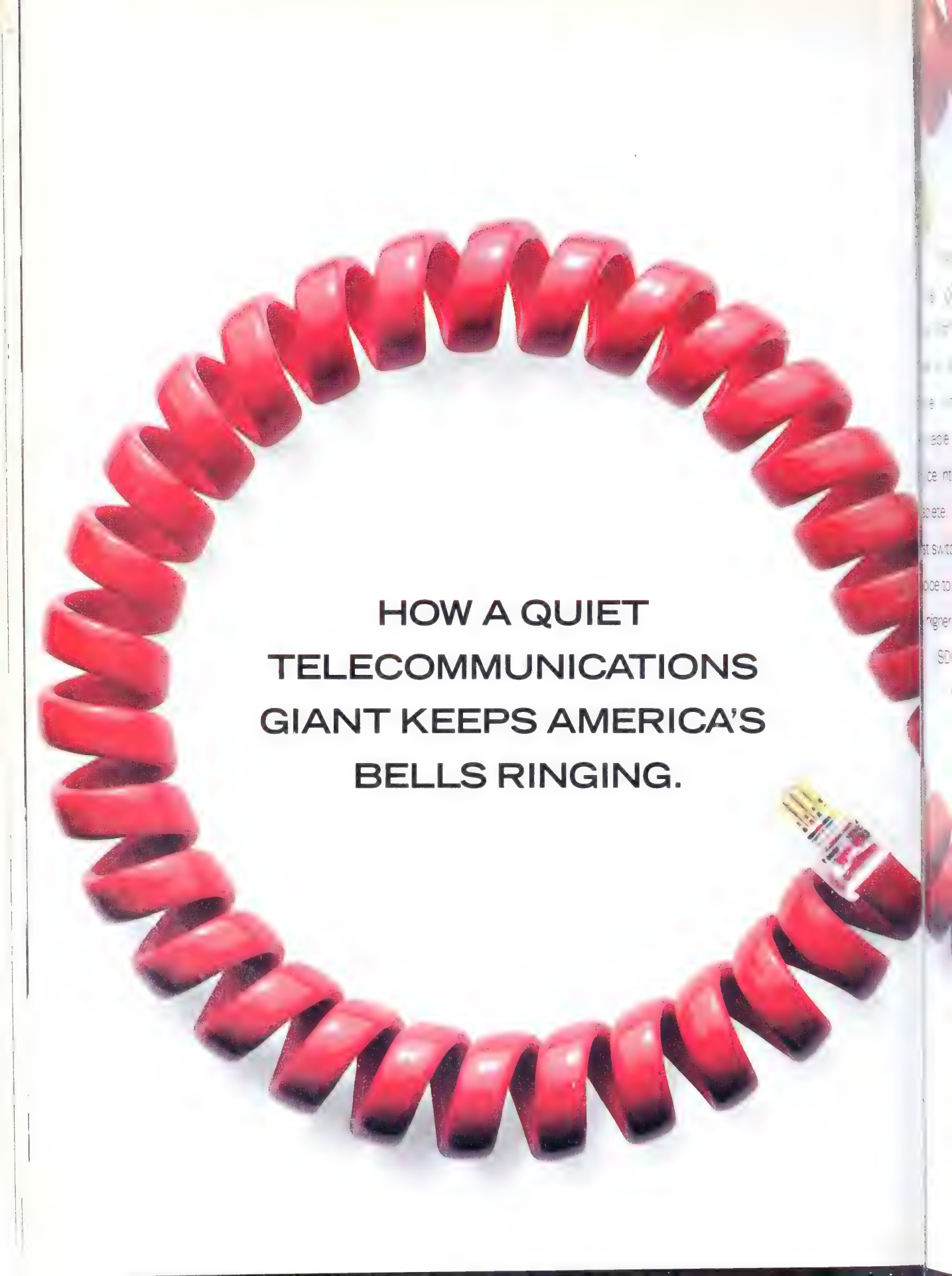
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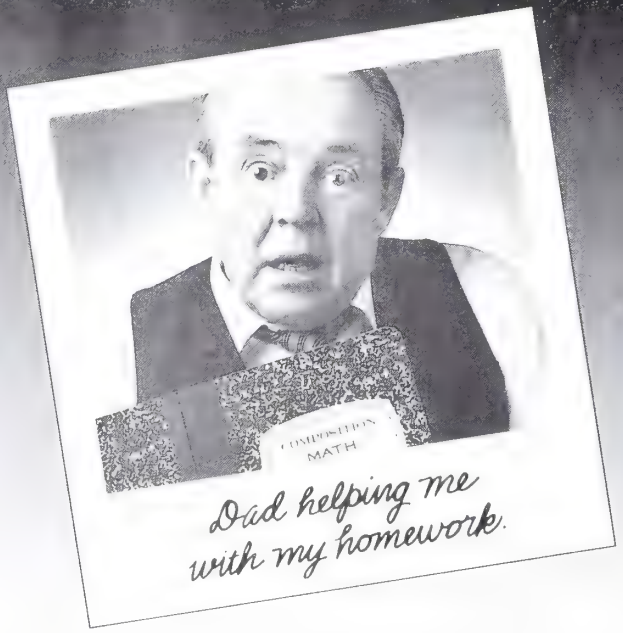
The Guardian Actually Gets The Good Grades My Dad Claims To Have Gotten.



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SNAPSHOTS FROM HELL
By Peter Robinson
Warner Books • 286 pp • $22.95

YEAR ONE
By Robert Reid
William Morrow & Co. • 331pp • $23

TALES FROM TWO 'BOOTCAMPS OF CAPITALISM'

I'll admit this at the start: I didn't much like business school, and a cursory examination of my academic transcript will reveal that the sentiment was mutual. For two years, I felt like a white rat trapped in some mysterious behavioral study—something to do with group dynamics, motivation strategies, and sleep deprivation. I learned a lot, but the process was weird.

Now, via two new books, I get to relive those days. Rapture! The first, *Snapshots from Hell: The Making of an MBA*, is former Reagan speechwriter Peter M. Robinson's tale of his journey through Stanford University's MBA program. The second, *Year One: An Intimate Look Inside Harvard Business School, Source of the Most Coveted Advanced Degree in the World*, comes from Robert Reid, now a second-year student.

The basic plots are identical: A bunch of talented, hypermotivated young people are put in a classroom together. Driven mostly by a profound fear of failure, they work insanely hard for months on end. After a while, they realize they probably aren't going to fail and instead start worrying about finding jobs. A collective rush to the career-placement office ensues.

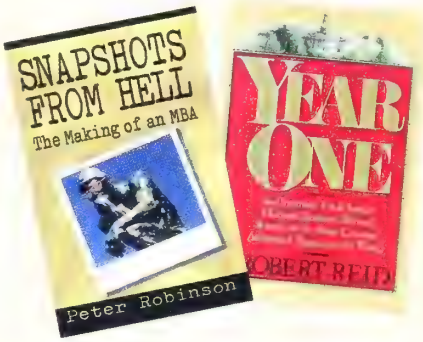
Well, no one ever said business school was sexy. Yet there is a mystique to these hallowed places: A striking number of their graduates, after all, turn out to be chief executives, investment banking heavies, and, generally, rich. But what actually goes on behind the ivied walls often isn't that interesting. Robinson and Reid both veer from academic theory and case studies to classroom hijinks and which pizza they had for dinner. It's entirely appropriate: B-school, at least year one, is nothing if not an obsession with the mundane.

There is, for one thing, the preoccupation with classroom seating: Front row is for losers; back row ("skydeck") is hip. Then there's the abiding fixation on speaking in class. "At every pause in the conversation, it was hands, hands, hands," Reid writes. "It became increasingly difficult to 'get in'.... My urgency was heightened by the fact that grades... depended so heavily on in-class commentary. And of course there was the natural desire to establish myself with my new peer group."

Reid understands, I think, that he was acting like an imbecile—which is pretty much par for the first-year course. Both books ably describe the panicky, self-absorbed struggle for academic and emotional survival at these "boot camps of capitalism." In this regard, Robinson, a self-confessed "poet" (B-school slang for liberal-arts types), suffers more than Reid, a former management consultant. No matter: Everyone is consumed.

Neither book matches two earlier entries in this genre: Peter Cohen's

Both authors ably describe the panicky, self-absorbed struggle for survival in B-school



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thoughtful, almost lyrical 1973 work *Gospel According to Harvard Bus School*, and Fran Worden Henry's *Toughing It Out at Harvard*. The accounts are both somewhat co mised by their use of half-real, com characters, events, and conversa And both authors lapse too often cuteness, notably with annoying r ductions of regional and foreign nerisms. In fact, the two are eerily ilar in every way.

They do provide an up-to-dat counting of the state of the MBA most striking quality of this gener appears to be its sheer ambivalenc hen and Henry depicted themselve their fellows as men and women o pose who saw a top-notch business cation as their passport to go out change the business world. Reid Robinson aren't so sure of thems Reid wonders whether Harvard, fo and his cohorts, is simply the inevi terminus of a young life driven by petitiveness: "It seemed all too ea heed the siren's song of the Lem March . . . and then get pulled alon decades." He questions his persona professional aspirations, "but in the it was hard to ignore the call o peers' thundering feet."

Robinson, for his part, doesn't completely into a cynical professor's tention that "MBA degrees are u cards for yuppies"—that degrees places such as Stanford merely s to the job market which people "good enough to get in." Robinson ly comes out of school knowing about business than when he ente But he also recognizes the mone value of his sheepskin, and his c mates don't seem very interest more than that.

In truth, of course, many of t MBA grads will do great things their lives. The people I went to sc with were an impressive, creative, erally farsighted lot. Dozens alr have started businesses of their several advise developing nations; o running for lieutenant governor. Ne Reid nor Robinson captures that p ise. They do, however, manage to manize the experience—to demystify institutions and the people within, if they're describing just two top programs among hundreds.

The problem with both books is dreary subject. I remember the pr sor who told us, during our first- funk: "Someday you'll look back on t days fondly. The real world is a tougher." He was wrong: The real w is fun. B-school was a grind.

BY KEITH H. HAMMO

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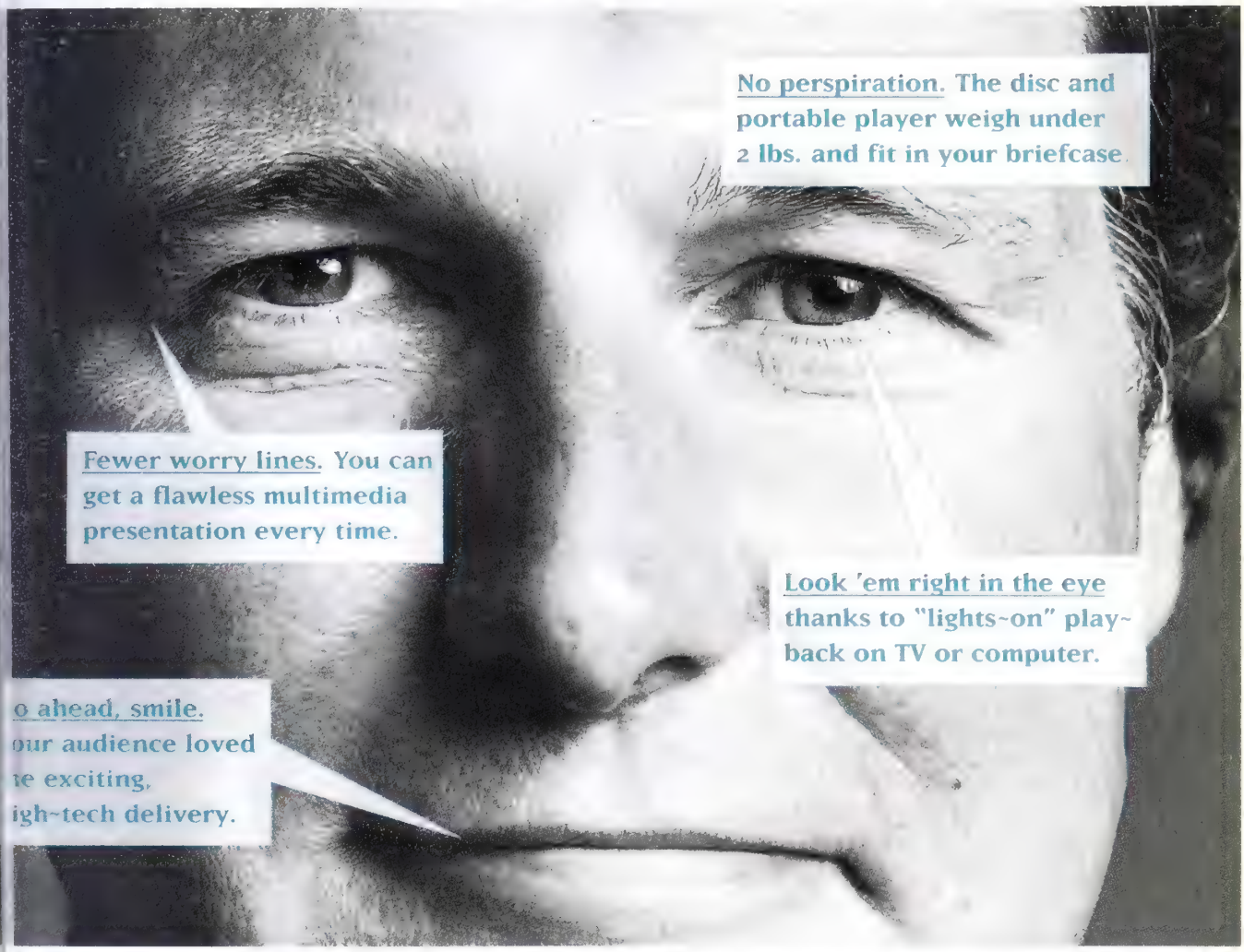

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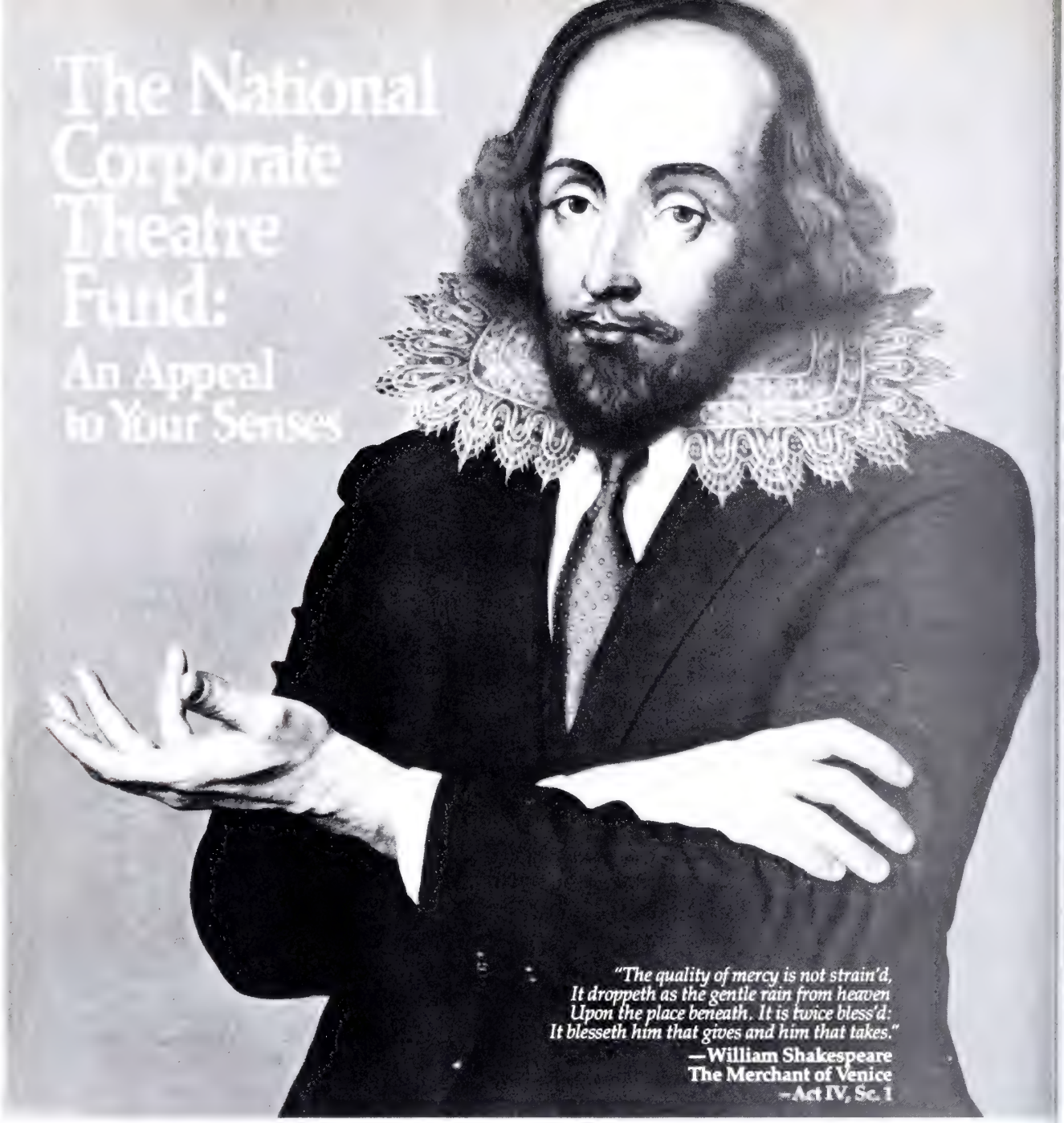

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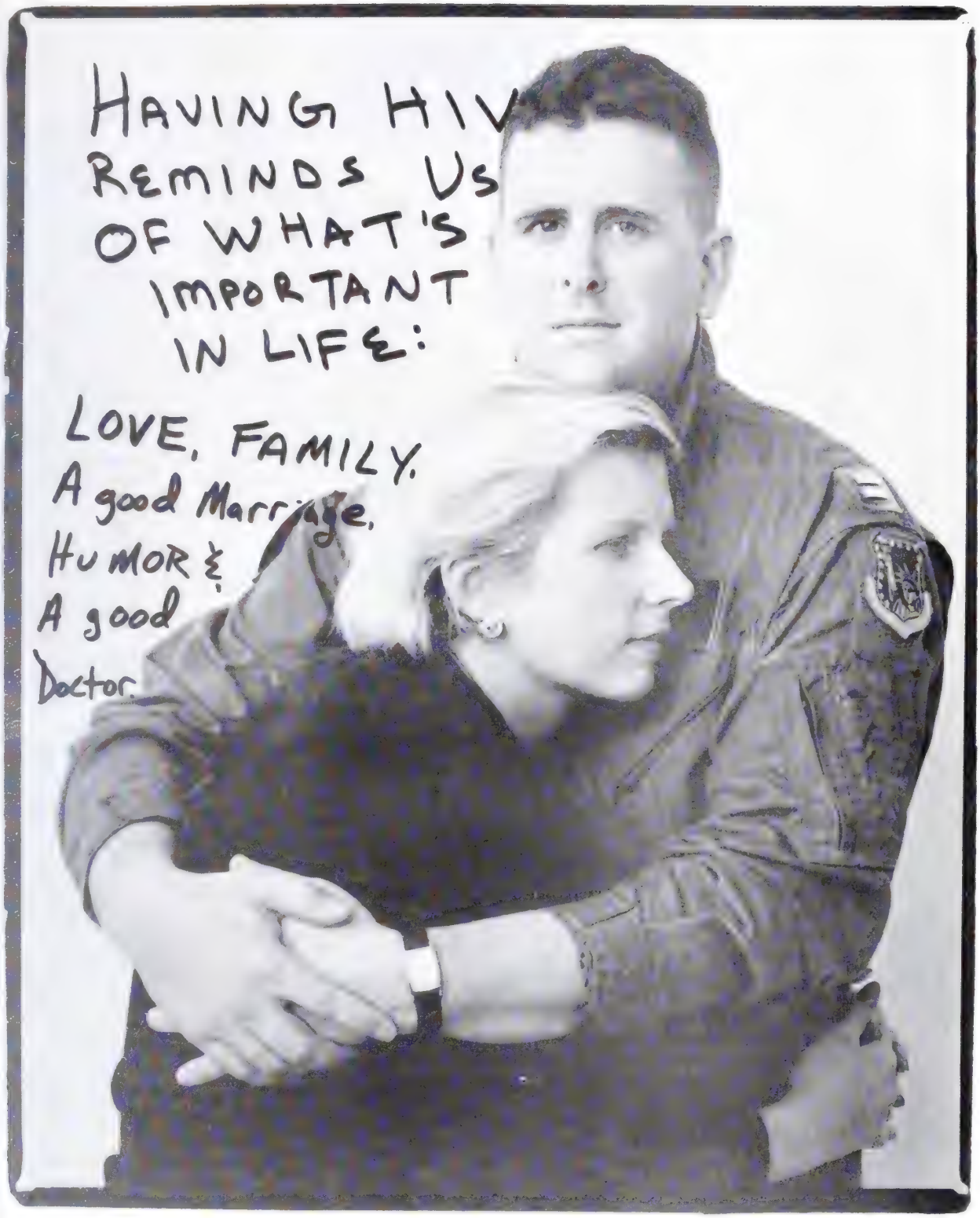

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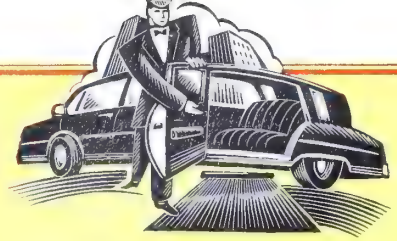
SAN FRANCISCO AIDS FOUNDATION 1993 PHOTOGRAPHED BY ANNIE LEIBOVITZ

MICHAEL 30 years old, Captain, U.S. Air Force and Veteran of the Gulf War [illegible] HIV positive two years ago

CAROL 30 years old, speaks and writes about living with AIDS. Carol's had HIV for several years, she was diagnosed with AIDS two years ago. Carol and Michael plan to renew their wedding vows on [illegible]



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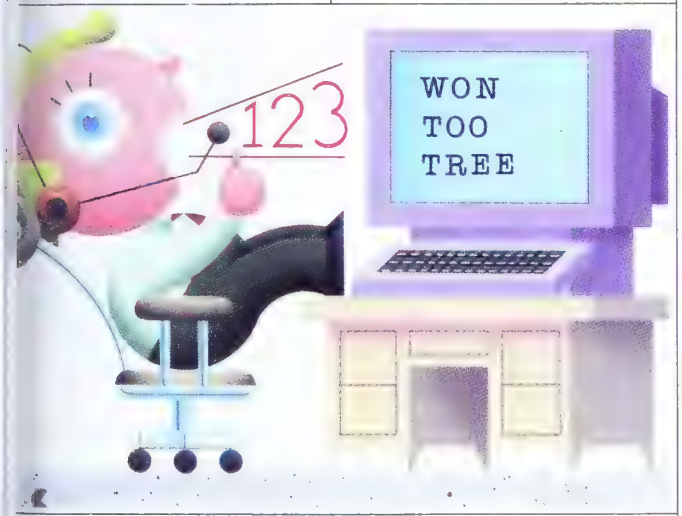
EDITED BY STEPHEN H. WILDSTROM

COMPUTERS STILL HAVE A TIN EAR

Captain Jean-Luc Picard doesn't have to know how to type. When the commander of the starship Enterprise wants something from his computer, he just asks for it.

For many of us stuck in the 20th century, however, the keyboard remains a barrier to efficient use of computers. Keyboard-phobia is widespread, especially among middle-aged men who got into business thinking that typing was something their secretaries did. That creates a big potential market for computerized speech recognition. Despite enormous improvements in technology and some useful specialized applications, the day when you can easily and naturally dictate a letter or memo to your computer remains well in the future.

The adventurous can get a glimpse of that brave new world with software-hardware combinations now on the market. The development of fast, cheap digital signal-processing chips has helped speech recognition grow from laboratory toy to useful tool. But practical applications are still limited and specialized. Telephone companies are using the technology to replace human operators, and airline reservations offices and catalog-sales operations are developing their own systems. These highly structured situations typically involve simple commands and conversations. Says Robert W. Lucky, vice-president of Bellcore, the research arm of the regional Bell telephone companies: "The sort of normal conversation we're having just is not going to happen" with computers.



Kurzweil Applied Intelligence's new Voice for Windows is a pricey but comprehensive introduction to speech recognition. The $995 package lets you use speech to replace keyboard commands or mouse clicks in a number of popular programs. In addition to these "command and control" functions, it—and Dragon System's similar Dragon Dictate for DOS—let you dictate text to your word processor or numbers to your spreadsheet. Sort of. Voice uses what's called "discrete" speech recognition—it can only understand language one word at a time. This requires you to speak with a distinct pause between words, a procedure I found difficult and unnatural.

Speech Systems' Phonetic Engine takes a very different approach. It lets software developers write programs that understand "continuous" speech, meaning you can pace your words naturally and the computer will parse the sentence. Of course, there's a catch. The system is limited to a narrow vocabulary and tightly controlled syntax. For example, the company used its $995 development system to write a program designed to train air traffic controllers. It's good at understanding statements such as "Delta 5-9-2 clear to land on runway 2-7-L" but can't handle "Please get me a cup of coffee." The difference is that in controller-speak, the software can count on familiar patterns; for example, an airline name is always followed by a number.

CUT AND PASTE. Even crude speech recognition can be a godsend for people with disabilities. And it can be very helpful on jobs where you can't spare your hands for the keyboard. For example, speech-recognition systems are being used to help doctors record their actions in the emergency room or operating room.

Broader use awaits breakthroughs in artificial intelligence that will allow computers to understand natural, spoken language. And programs will have to be rewritten to make them easier to use with spoken commands. For example, deleting a sentence in Microsoft Word using the Kurzweil product requires a string of commands, such as: "Edit. Select Current Sentence. Edit. Clear." That's because the program is designed to be controlled by a mouse and the keyboard, not by spoken commands.

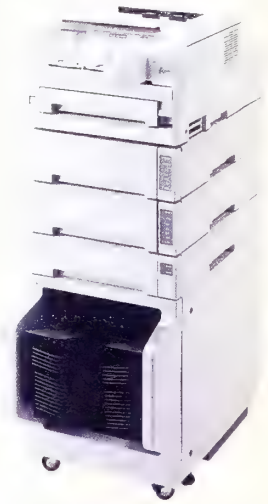
So don't expect voice-controlled programs to become a hot item at your local Egghead Software store anytime soon. As Bellcore's Lucky puts it: "It's still a lot easier to type certain things than to say them." *S. W.*

BULLETIN BOARD

THE ENVIRONMENT

AND NOW, 'GREEN' PRINTERS

Computer manufacturers have been rushing energy-saving machines to market, and now the "green" movement is spreading to printers. Despite aggressive recycling programs, millions of laser-printer cartridges still end up



in landfills. In Kyocera Electronics' new Ecosys line of printers, however, the cartridge is replaced with a self-cleaning printing drum coated with superhard amorphous silicon. Users only add toner. Ecosys prices are about 10% higher than comparable cartridge-based units, but Kyocera says its customers will save on supplies.

MOUSE NEWS

CLICK ONCE IF YOU'RE A LEFTY

If you buy a PC, it probably comes with a sleek Microsoft mouse shaped to fit a user's hand. No fair, complains Kristin Ryan, an engineer from Placentia, Calif.: "The mouse I have is for right-handers only!" this southpaw writes. Microsoft says that lefties gave the mouse a passing grade in premarket tests—and Windows software allows left-handed users to reverse the functions of the two mouse buttons.

Questions? Comments? techandu@mgh.com on Internet or fax (202) 383-2125

JIM COURIER/at play

Is there anything Jim thinks his fans should know? He's not wearing a ring. "I'm single, send pictures." Finding his address is up to you.

"I'd much rather be a rock & roll star than a tennis player," says Jim. That's why you're almost as likely to see a guitar in his hand as a racquet.

Some of the toughest volleys to handle come from the press. "I do read the sports pages, but I stopped reading the tennis articles two years ago. I put my hand over them. I don't need a reporter to tell me how I'm playing or how I'm feeling."

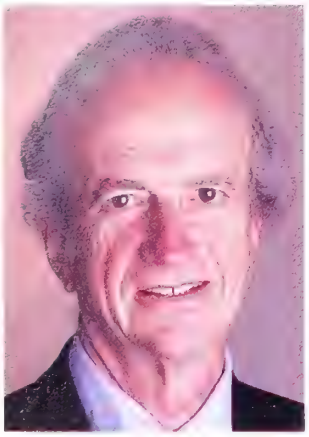
Jim is more at home in a hotel room than here in his own condo. "I'm on tour thirty to thirty-five weeks a year." Needless to say, his biggest fan is his travel agent.

Mr. Courier has graciously donated his appearance fee to Big Brothers/Big Sisters of Greater Miami and The Greater Miami Tennis Patrons Foundation.

Client: Peabody Co., Inc.

NEITHER RAIN NOR SLEET NOR GOOD IDEA SHALL SHAKE UP THE POSTAL SYSTEM

BY GARY S. BECKER



Privatization has shown how wasteful government management is, but a lot of entrenched parties are determined to keep the monopoly going

GARY S. BECKER, THE 1992 NOBEL LAUREATE, TEACHES AT THE UNIVERSITY OF CHICAGO AND IS A FELLOW OF THE HOOVER INSTITUTION

It is far easier to create bad public programs than to eliminate them once they have been around for a while. This old but frequently ignored law of political science has been called "the tyranny of the status quo," and it helps explain why even downright perverse government policies stubbornly survive and sometimes even expand.

The political status quo is important because groups with a lot to gain from particular programs fiercely defend their continuation, regardless of harmful consequences to others. At the same time, opposition often is weak and fragmented because the damage, in the form of high taxes or bad service, may be spread over so many groups that no single one has a strong enough incentive to protest vigorously. Sometimes, the harm becomes apparent only after a policy is changed, as when privatization reveals how inefficient a state enterprise had been or when drastically reduced tariffs and quotas on imports encourage imports of attractive foreign products.

Government monopoly over mail delivery provides an excellent example of the influence of the status quo. In the past, most nations gave government enterprises sole responsibility for the delivery of letters. The U. S. Constitution does not stipulate a government monopoly, but it does give Congress the power "to establish post offices and post roads."

DEAD LETTERS. Yet after the experience of the past 50 years, few rational people anywhere would advocate a government monopoly to collect and distribute mail. The quality of service in different countries ranges from barely adequate to atrocious: In Canada, Italy, Israel, Argentina, and most Third World countries, no one expects letters to be delivered within a reasonable time. The U. S. postal system is better run than average, but dissatisfaction is widespread. In my home, Chicago, a recent scandal revealed that tons of mail had either been burned, discarded, or left undelivered for years.

The monopoly enjoyed by postal systems has made them sluggish and unimaginative. Successful overnight delivery of mail and small packages was pioneered by Federal Express Corp. despite obstacles erected to prevent regular private-mail service. United Parcel Service Inc. and other companies have taken over most of the market for larger packages by offering speedier, more reliable, more convenient, and sometimes less expensive service. Postal systems played no part in developing fax transmission, computer-based electronic mail, and interactive TV, though a less-regulated system would have tried to branch into these newer forms of message delive

But except in a few nations, it hasn't b possible to get more than cosmetic change postal monopolies. Privatizing mail deli and other reforms are strongly resisted p ically by postal workers who fear, corre that many of them would lose their jobs the U. S., politics is an integral part of system because postmasters are often poli appointees. Postal managers also oppose cal change, since they expect to be replace more efficient managers from the private tor, while regulators expect their powe be reduced if competition replaces gov ment controls. Businesses and households benefit from subsidies to third-class mail delivery in rural areas often oppose reform cause they expect the cost of their mail vice to rise.

MOMENTUM. Fortunately, the status quo be undermined when the harm becomes s ciently large and transparent. Dynamic po cal leaders, such as Margaret Thatcher, come to power calling for widespread priv ization and other cutbacks in government grams and regulations. Other politicians, s as President Carlos Menem of Argent change their views after being in office fo while, because they see the opportunity for litical gain by catering to the interest those hurt by bad government policies.

The trend during the past 15 years tow privatizing badly run government enterpr has gained worldwide momentum. Many tions have sold off telephone companies, refineries, airlines, and government enterp es in various other sectors. Even state-ow postal systems have not been immune to p sures toward privatization. The Netherla announced in April that it will shortly begi sell a majority interest in its post and t phone monopoly. Although Britain has on the more efficient postal systems, it rece proposed a public equity offering that place a majority of the shares in priv hands. Sweden is letting private compa compete with the state-run system in deli ing mail in Stockholm. I expect other count to follow Sweden's example and allow priv competition against the state postal syste

If the tyranny of the status quo ever comes generally recognized as a reliable law politics, there will be increased opposition bad proposals, even those framed on a sm scale or characterized as temporary. And may become a little easier to eliminate exist policies that have clearly done far more ha than good.

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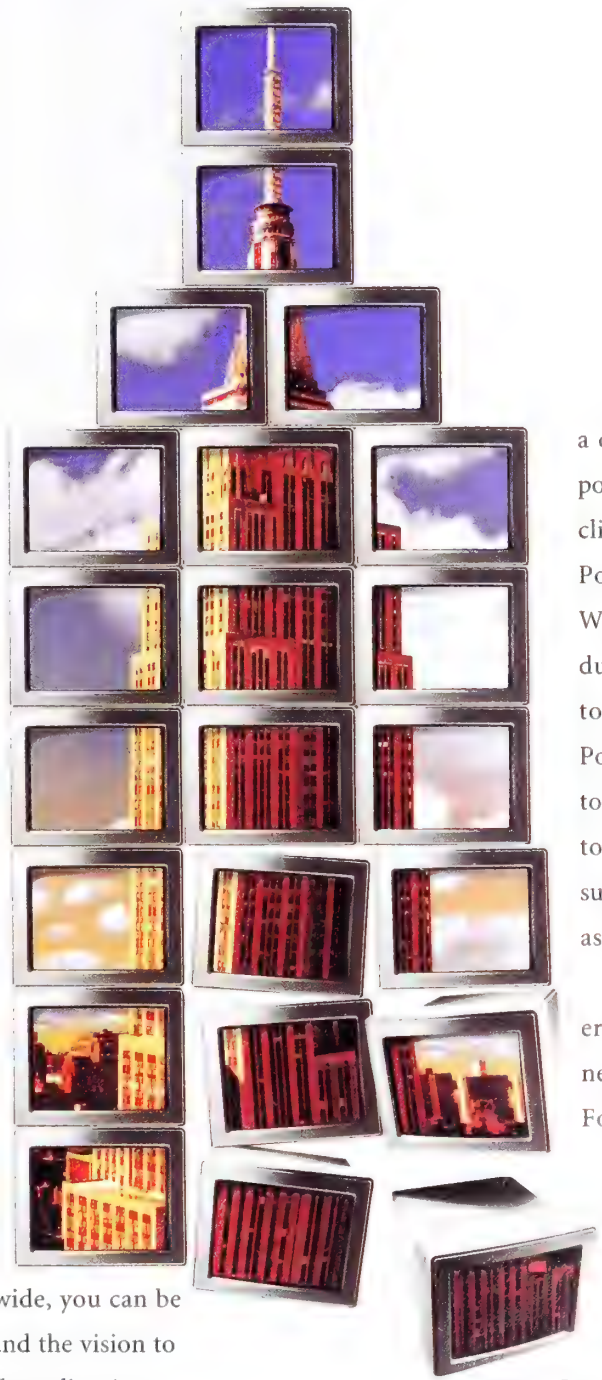

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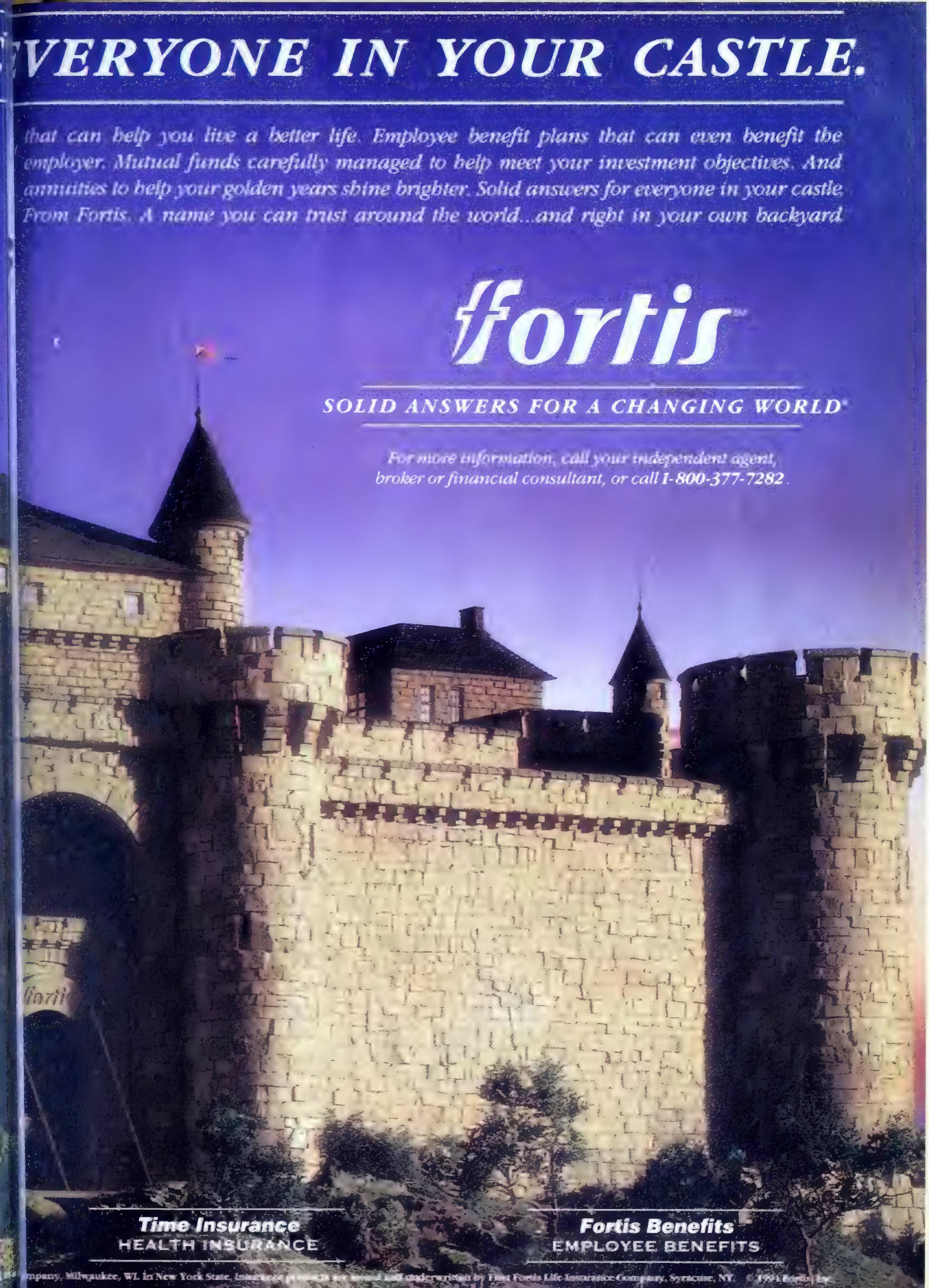
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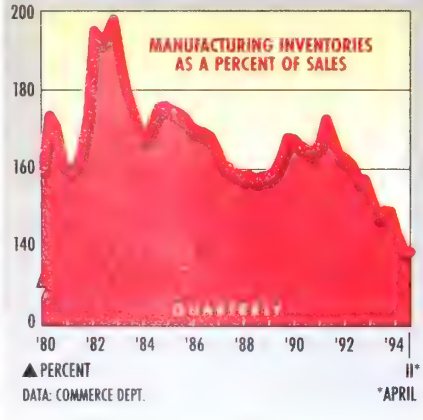
BY GENE KORETZ

INVENTORY DEMAND MAY BE ABOUT TO BOLSTER U.S. GROWTH

Although auto sales and housing activity may be losing steam, economists Joseph Carson and Joseph Quinlan of Dean Witter Reynolds Inc. see little sign of a slowdown in economic growth. Capital spending and rising exports are taking up the slack, they argue, and "a big economic catalyst, inventory building, is about to come on strong."

Despite its normally critical role in business cycles, inventory demand in the current upswing has been unusually subdued. Real manufacturing inventories have actually been declining since mid-1990, and factory inventory-sales ratios are currently at 30-year lows.

FACTORY INVENTORIES ARE RAZOR-THIN



Economists have sought to explain the muted inventory cycle by pointing to the adoption of just-in-time inventory control techniques. But a new econometric study by Chan Huh of the Federal Reserve Bank of San Francisco finds no evidence that just-in-time measures have changed inventories' cyclical role.

According to Carson and Quinlan, many companies that only a year ago saw their thin inventories as a plus are now worrying about price and availability. And the breathing space provided by slack demand overseas is evaporating. Quinlan notes that cargo ships bound for Europe this summer are almost fully booked for the first time in five years.

One clear omen is the May survey of the National Association of Purchasing Management. Purchasing agents reported the fastest pace of inventory growth and the slowest pace of vendor deliveries in five and six years, respectively. And the number reporting paying higher prices for supplies was the greatest since the Persian Gulf war.

Once an inventory-building cycle gets under way, observes Carson, it tends to feed on itself—pushing up prices and the incentive to build stocks even more. "Rising output to meet inventory needs will create new jobs and income," he predicts, "and that will offset the current slowdown in consumption."

WHY AMERICAN DRUGMAKERS GOT A BAD RAP...

Drug companies are often assailed as price gougers by consumer groups, who cite government price indexes showing fast-rising prices of prescription drugs. But a recent study by Ernst R. Berndt, Zvi Griliches, and Joshua Rosett of the National Bureau of Economic Research concludes that the measures are seriously flawed.

The study analyzes sales data for 2,090 prescription products sold by four major U.S. drug companies from 1984 through 1989. Although wholesale prescription drug prices were reported by the Bureau of Labor Statistics (BLS) to have risen at a 9% annual rate during that period, the study finds that drug prices rose at just a 6%-to-6.7% clip.

Why the discrepancy? The two researchers found that the BLS undersampled newer drugs, which tend to post moderate price increases, and gave too much weight to medium-aged drugs (4 to 10 years old), which tend to have above-average increases.

The BLS has also treated generic drugs and their patented equivalents as separate products, though it makes more sense to combine them in a price measure. In the case of one typical drug, Griliches and economist Iain Cockburn found that adopting such an approach turned a 14% rise into a 48% decline.

...AND WHY PRESCRIPTION PRICES MAY EVEN DROP

Spurred by the research described above, the government is now weighing ways to improve its drug price measures. Meanwhile, the drug industry itself has been exercising price restraint. And even more price moderation seems to be in the wings.

A recent General Accounting Office report found that in 1991, drugmakers charged wholesalers 60% more in the U.S. than in Britain for a market basket of 77 frequently dispensed brand-name prescription drugs. One reason for the difference was that the U.S. market has many buyers, whereas in Britain the government pays for most such purchases, and thus can exert heavy bargaining power on producers.

But the U.S. market is now shifting dramatically—away from traditional wholesalers and toward mail-order pharmacies, managed-care groups, and government programs like Medicaid, which are able to negotiate big price discounts. Industry experts say such channels already account for about half of all U.S. drug sales, and their reach is growing. Thus, overall prescription drug prices, which are up only 3.2% this year, could actually decline somewhat in 1995.

WILL LONGER HOURS FINALLY START TO LIFT U.S. WAGES?

Although May's sharp drop in the unemployment rate to 6% has heightened inflationary fears, skeptics argue that recent changes in the government's survey methods may have biased the reading in unknown ways. Especially suspect is the finding that the labor force has shown no growth since January, despite a big surge in hiring.

To get around such problems, economist David Kelly of Lehman Brothers Inc. has constructed his own gauge of labor capacity use: total hours worked (calculated by multiplying total employment by the average workweek) as a percent of total potential work effort (derived by multiplying the entire 16-to-65-year-old population by 40 hours). His calculations show that the measure hovered between 60% and 65% from the late 1940s to the early 1980s, moving to the top of that range at cyclical peaks.

During the 1980s expansion, however, Kelly's measure vaulted to still higher ground, as the workweek expanded and women continued to surge into the workforce. After peaking at 72.4% in 1989, it fell to 69% in 1992. But by May of this year it was back to 72.3%.

Such high labor capacity use, says Kelly, suggests that labor cost pressures may be building, though the evolution of competitive labor markets makes the exact danger point uncertain. Meanwhile, he predicts that the strong trend toward longer working hours will continue to reward businesses that cater to people with little spare time.

ERIC HOFFMANN/BW

UNE 20, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

RELAX. JOBS ARE GROWING, BUT INFLATION ISN'T

The employment report is supposed to be the Labor Dept.'s monthly snapshot of the U.S. labor market. The May installment, though, looked like a ouble exposure: Payrolls rose less than expected, a sign iat economic growth is moderating to a less inflationary ace. But the jobless rate dropped sharply to a level that iggests wage and price pressures are just around the nd. Which image is correct?

Stick with slower, noninflationary growth. Besides, the government's payroll survey has always been more dependable than its survey of households, from which the data on the labor force and the unemployment rate are derived. That's especially true now, since Labor is still working out the kinks resulting from its switchover a few months ago to a new method for measuring lessness that tries to remove gender bias from the usehold survey.

The payroll data show that businesses added 191,000 rkers in May, well below the hefty increases of 358,000 April and 379,000 in March. What's more, that gain indes the return of the 70,000 Teamsters who were on ike in April. The May payroll additions were the narvest in nine months, with only 50.6% of 356 industries ting on new workers, compared with 62% in the two vious months.

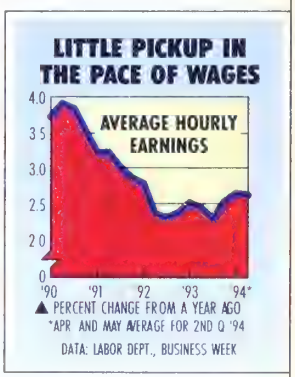
The smaller May job gains, taken together with weak April readings for the index of leading indicators, facy orders, and consumer spending, support the notion t growth in the economy is cooling down to a pace that be to the liking of both the financial markets and the leral Reserve (page 120).

WHY THE JOBLESS RATE WAS SO LOW

Without a doubt, labor markets are tighter now than a year ago. In fact, spot shortages of labor are beginning to crop up in a few categories (page 36). More-r, the weak California economy is single-handedly add- 0.3 percentage points to the national jobless rate, gesting that the overall rate is understating labor-ket tightness across the rest of the country (chart). he plunge in the unemployment rate, however, from 6 in April to 6% in May, just didn't happen. Labor t. officials admit that the reliability of the new household data is questionable. The main problem is a lack of sufficient data history, without which proper seasonal adjustment cannot be made. Indeed, under the old measure, May joblessness fell to 6.1%, a surprising result given that the new rate has typically run half a percentage point higher than the old one.

Moreover, the new data show that the labor force has risen only 0.8% in the past year. That runs counter to the growth in the working-age population, which has increased twice as fast. In particular, the numbers say the labor force hasn't grown at all since February. No way. If the work force had risen at a more realistic pace, the May jobless rate would have been much higher.

As Bureau of Labor Statistics Commissioner Katherine Abraham noted after the data for May were released, large movements in the unemployment rate in a single month often are partially reversed in the following month. That should be the case this time as well, suggesting far less upward pressure on wages than the May jobless rate would imply.



To date, wage growth shows little sign of accelerating. Average hourly earnings rose 0.5% in May, to $11.11, but so far in the second quarter, hourly pay has increased just 2.6% from a year ago. That annual pace is up just slightly from 2.4% in the second quarter of 1993 (chart).

What's more, all of that pickup in the past year occurred in manufacturing, where productivity is growing at a near-record pace and where unit labor costs are falling. Pay growth in the larger service sector has gone nowhere for two years.

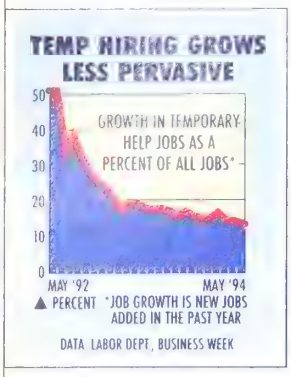
WEEKLY PAY IS OUTPACING INFLATION

But even as wage growth stays low, workers generally are generating plenty of income. That's because they are working longer hours. The workweek rose to 34.9 hours in May, a seven-year high. As a result, average weekly earnings during the past year are up 3.3%, faster than inflation.

Moreover, the quality of jobs is improving. Businesses, for instance, are relying less on temporary help—employees who don't accrue costly benefits or seniority. In the past year, only 336,000 new jobs arose in what the Labor Dept. labels "personnel-supply services," or temporary

ERIC HOFFMANN/BW

help agencies. This sector chalked up 13.1% of all new jobs created. While that percentage may appear to be impressive, such temp jobs accounted for about 50% of all job growth two years ago (chart).



And temps are no longer the stereotypical receptionist working the front desk. Economists at the Federal Reserve Bank of Chicago looked at the nature of temp jobs. In particular, they examined temporary jobs classified as industrial workers—employees who handle heavy machinery, run production lines, and move goods. While some industrial workers may work at wholesale or transportation companies, most probably are employed in manufacturing.

The Chicago Fed researchers estimate that at the beginning of this expansion, about 100,000 new factory workers a year were hired through temp agencies. That rate has slowed to 85,000 in the past year, as factories began to add to their payrolls outright.

What the analysis suggests is that instead of paring 62,000 production jobs since 1991, the factories have actually added about 200,000 jobs. And that doesn't include clerical and white-collar temps who work at manufacturing companies.

MORE EVIDENCE OF SLOWER GROWTH

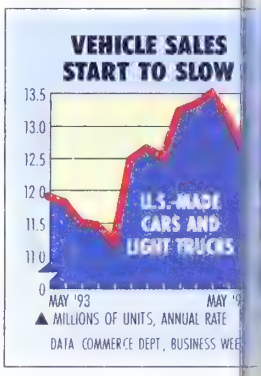
If the May employment report was a bit blurry, the latest data on factory activity, consumer spending, and installment credit offer a more focused picture of the outlook. What's in the viewfinder? Evidence of slower growth as the economy begins feeling the effects of higher interest rates.

The loss of 2,000 factory jobs in May and the decline in the factory workweek from 42.2 hours to 42.1, for instance, suggest that industrial production was weak last month. Slowing demand explains why manufacturers have little need to speed up assembly lines.

Factory orders slipped 0.1% in April, and since January they are up just 1%, compared with a 5.6% gain in the preceding three months. Inventories, however, edged up only 0.2% in April. So factories aren't stuck with a stock overhang that would foreshadow steep output cuts.

Tight inventories can backfire sometimes, though. The recent drop-off in sales of motor vehicles is partly the result of a shortage of popular models as well as the impact of higher interest rates on car loans and leases. Sales of U. S.-made cars and light trucks fell to an annual rate of 12.6 million in May, down from 13.1 million in April (chart).

Sales at department and chain stores slacked off in May, as well. The *Johnson Redbook Report* says that sales last month fell 2.6% before rebounding 3.1% in the first week of June from the May average.



The shopping slowdown means that gains in installment credit should taper off. In April, however, consumers added a gargantuan $8.9 billion in debt—the most in more than nine years, including a $5 billion surge in revolving debt.

Why are consumers feeling more comfortable about pulling out their credit cards? A stronger sense of job security probably helps, as does better income growth. Debt as a share of disposable income stood at 16.7% in April. While that ratio is on the rise, it is still quite manageable.

The expected gains in jobs and incomes mean that debt loads should remain benign. So, too, the expansion should stay on its course of slower growth. That trend isn't very glamorous, but it is the surest way to keep inflation out of the economic picture.

THE WEEK AHEAD

RETAIL SALES

Tuesday, June 14, 8:30 a.m.

Retail sales probably were unchanged in May, after falling 0.8% in April, according to the median forecast of economists surveyed by MMS International, a division of McGraw-Hill Inc. The disappointing performance is suggested by the drop in motor-vehicle sales last month and the decline in sales at department and chain stores calculated by the *Johnson Redbook Report*.

CONSUMER PRICE INDEX

Tuesday, June 14, 8:30 a.m.

Total consumer prices likely increased 0.3% in May, after edging up just 0.1% in April. That means consumer inflation is running a mild 2.5% during the year ended in May. Excluding volatile food and energy costs, core prices probably rose 0.3% last month as well, on top of a 0.2% advance in April.

INDUSTRIAL PRODUCTION

Wednesday, June 15, 9:15 a.m.

Output at the nation's factories, mines, and utilities probably rose just 0.1% in May, says the MMS survey. That's indicated by the drop in car output scheduled by auto makers and a fall in factory jobs. Operating rates probably stood at 83.5% in May. In April, industrial production increased a solid 0.3%, and operating rates were at 83.6%.

BUSINESS INVENTORIES

Wednesday, June 15, 10 a.m.

Manufacturing, wholesale, and retail inventories likely rose 0.2% in April, reversing the 0.2% decline posted in March. Factories have already reported a 0.2% gain in their stock levels. Business sales probably fell about 0.5% in April, after surging 1.2% in March.

HOUSING STARTS

Thursday, June 16, 8:30 a.m.

The MMS median forecast is that housing starts fell to an annual rate of 1.43 million in May, from 1.46 million in April. Higher mortgage rates are starting to hit homebuilding.

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Ely Callaway
CEO, Callaway Golf

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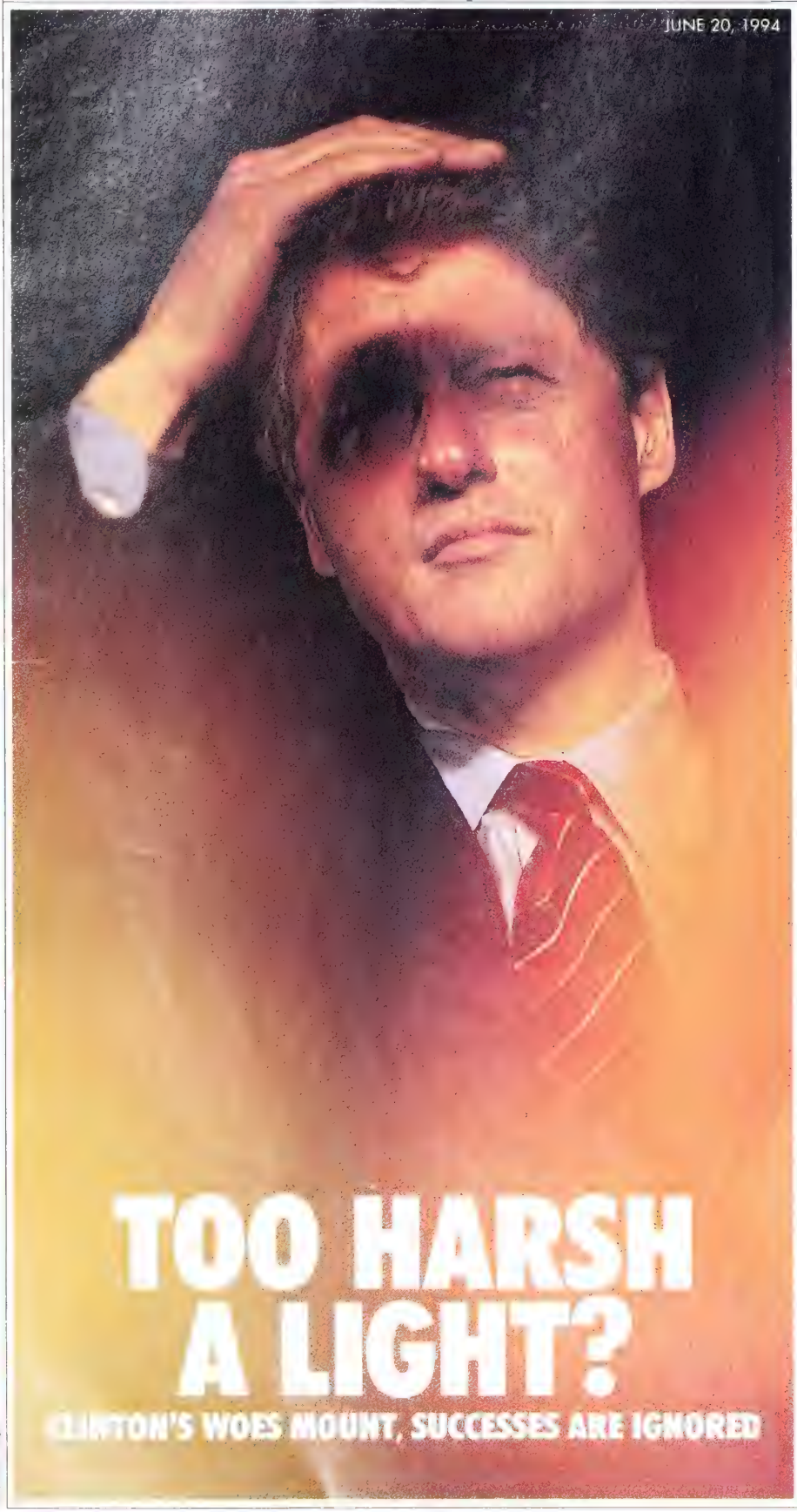
THE WHITE HOUSE



It was a powerful speech, and one of the few moments that evoked genuine emotion in Bill Clinton's frenetic foreign tour. Until that windy day in Normandy, much of his European trip had been a numbing procession of ritual images—Clinton posing with the Pope, waving from the deck of the royal yacht Britannia, and saluting an awkward salute to sailors aboard the U.S. aircraft carrier George Washington.

But on June 6, the President, who many military veterans malign as 'Slick-To-Serve, addressed a crowd of Day survivors gathered at Normandy American Cemetery. There was scarcely a dry eye as he declared: "We are the children of your sacrifice." The tribute drew praise even from hardened Clinton bashers—and sighs of relief from White House aides, who had long fretted about the trip.

Unfortunately, Clinton's European journey couldn't be extended indefinitely. As the President headed home on June 8, he was confronted by his private Omaha Beach: A landscape pocked with political land mines and bristling with partisan barbed wire.

With his legislative program stalled and his foreign policy under attack, Clinton has returned to confront the enigma of his Presidency: The economy is growing. America is at peace. Last year he clawed out big victories on the budget and trade, won family-leave legislation and cut taxes for the working poor. He has twice vanquished the mighty gun lobby by gaining restrictions on pistols and assault weapons.

Yet a majority of Americans now are dissatisfied with Bill Clinton's Presidency. In an early June Gallup poll taken for *USA Today*/CNN, only 46% of respondents approved of his job performance—a five-point dip in just two weeks. He has accomplishments of major dimensions—for which he gets no credit," says Ross K. Baker, a Rutgers University political scientist. "The good that he does gets overlooked because there's a constant referendum on him as a person. And he engenders incredibly strong emotions."

If Clinton's predicament were simply a matter of fleeting public unease, he could afford to worry less and enjoy the privileges of office more. But the President has complicated his problems with an unfocused, frat-house management style and a fumble-prone staff.

What's more, the news in the weeks leading up to the European trip was dismal: rising interest rates, a sexual harassment suit, yet another Arkansas

hum—White House aide W. David Watkins—ousted in an ethics flap. All his as tensions were escalating with North Korea over efforts to dismantle ts nuclear program (page 58).

Lately, some of Clinton's remarks ave had a wounded tone. And he has mple reason to sound besieged. On key ronts, his Presidency seems shaky. among them:

The character issue. Convinced that an impersonal society has weakened family es, Bill and Hillary Rodham linton have been conducting running sermon on what ie First Lady calls "a crisis the spirit." But the steady ream of allegations about linton's personal conduct has eached a critical point, anasts say. The resulting furor doubly devastating: It unermines the President's abily to be a moral beacon and stracts voters from seeing s achievements. "Character sues have become more imrtant in judging politicians, id that's where Clinton has problem," says Alan Seest, a Democratic pollster. hite House aides counter at such woes are not unique Clinton. "There's disgust ith all politicians," says one. Perhaps. But Clinton's charter problems do seem endss. Special counsel Robert Fiske Jr. continues to obe the Whitewater matr. And Clintonites concede e likelihood of future "bimbo uptions." Says a top advis: "The problem isn't our gislative [record], it's the aracter issue."

Foreign policy drift. For nths, support for the Presnt's handling of foreign afrs has been declining. hether the issue has been iving out Haiti's military lers, ending the slaughter Bosnia, curbing China's human-rights uses, or breaking the nuclear impasse th North Korea, Clinton's pattern has en familiar: threaten tough measures, onize, then back off. His latest somsault is typical: The White House ruptly abandoned its comprehensive amework" approach to liberalizing de with Japan in favor of limited secal talks.

The result has been a perception ong foreign leaders that the young President lacks foreign policy moorings. "Clinton's positions have changed," says House Foreign Affairs Committee Chairman Lee H. Hamilton (D-Ind). "He's struggling with the whole problem of intervention. He does not define with precision or articulate the national interest . . . but he has got to do it."

One problem is Clinton's belief that in the post-cold war era, economic competition overshadows national-security concerns. Another is the conviction of Secretary of State Warren M. Christopher and National Security Adviser Anthony Lake that mushy multilateralism is the only kind of intervention the U. S. public will accept. "Clinton doesn't want to be the foreign policy President," says one adviser. "But he fails to see that, even though people don't care about Bosnia, they care a lot when the U. S. seems incapable of handling foreign problems."

Capital gridlock. Could 1994, which is expected to produce little more than a diluted version of health reform, stand as the high-water mark of Bill Clinton's term? The possibility is rising as resistance to Clinton's agenda builds.

Democrats have lost every key election since 1992, and polls are picking up signs of major midterm GOP gains in November. Republicans hope to take 25 House seats—and have an outside shot at winning the Senate. When the dust settles, the Administration's plans to complete its "public investment" agenda could be history.

With an anti-Democrat tide rising, "the next two years are going to be the toughest of Clinton's Presidency," says Steven E. Schier, a Carleton College political scientist. Groans Democratic analyst Ted Van Dyk: "How on earth will he get anything done?"

By now, the three-year-old economic expansion should have lofted Clinton well past these dangers. No dice. With white-collar layoffs rampant and job insecurity high, the good economic numbers are masking an underlying anxiety over the economy. John E. Silvia, chief economist at Chicago-based Kemper Financial Services Inc., says the reasons include shock at rising interest costs and puny wage packages. Now, slowing economic growth is adding to the worries.

Adversity is nothing new to Bill Clinton, of course. In the long run, the same business cycle that carried him to victory two years ago, coupled with a weak field of Republican Presidential contenders, could mean he'll still be jogging around the White House well after November, 1996. But if he is to weather the storms to come, he will have to bolster the buckling pillars of his White House—and pronto. The question now: Will Clinton again indulge in his do-it-yourself impulses? Or will he call in some experienced contractors to lend him a hand?

By Lee Walczak, with Susan B. Garland, Richard S. Dunham, and Owen Ullmann, in Washington

PRESIDENTIAL ANGST

Approaching the midpoint of his first term, some key pillars of the Clinton Presidency are shaky:

ECONOMIC JITTERS

A surging economy, which has created 3 million jobs, has been Clinton's strong suit. But growth has slowed sharply, and interest-rate hikes are roiling markets. The key question for Clinton: Can the expansion last until '96?

MUDDLED MORAL AUTHORITY

The Whitewater affair, Hillary Rodham Clinton's sweetheart commodities deals, the Paula Jones lawsuit, and ethical lapses by Arkansas cronies have taken a toll. All contribute to "character" concerns about Bill Clinton. The upshot: The President's ability to sermonize about America's crisis of values has been damaged.

FREE-FLOATING FOREIGN POLICY

Clinton's flip-flops on Bosnia, Haiti, and China have unsettled Americans. Allies worry that the pattern of bluster and retreat might encourage Third World despots. Yet the President remains unwilling to shake up his visionless team of foreign policy advisers.

FADING LEGISLATIVE CLOUT

Clinton rode into Washington pledging to end gridlock. And he blitzed through a strong freshman year, winning uphill victories on the budget and the North American Free Trade Agreement. But this year, Clinton has met with fierce partisan opposition. Now, experts predict a bloodbath for Democrats in November. The result could be policy paralysis for the rest of the President's term.

HELP WANTED —BUT NOT DESPERATELY

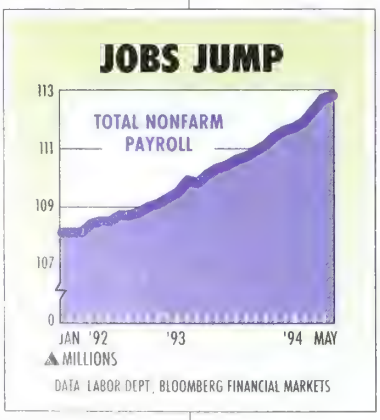
So far, labor shortages don't point to inflation on the horizon

An insurance company in Des Moines is scrambling to find systems analysts. A suburban Denver computer-parts maker can't get the welders it needs. Contractors in Atlanta are offering signing bonuses to skilled construction workers. Motorola Inc. is struggling to find enough qualified workers for its factories in Illinois. Here and there, like dandelions marring a suburban lawn, labor shortages are popping up around the country.

That doesn't come as a complete surprise to bond traders, economists, and top Clinton Administration officials, who have been peering through the statistical haze for signs of labor bottlenecks—the first sure indication that inflation is on the way. Indeed, when the Labor Dept. announced on June 3 that the May unemployment rate unexpectedly tumbled to 6%, the search for rising wages took on added urgency.

But hold on, inflationphobes. Even though a smartly growing economy created more than a million jobs since January, there are enough scarred veterans of corporate downsizings still out of work to keep cost pressures under control. That's why spot shortages haven't led to the kind of wage boosts that have sparked inflation in the past.

Most companies still have little trouble filling slots. Indeed, some businesses are slashing their total workforce even as they scramble to find employees with the right set of highly specialized skills. Demand for some low-skill labor remains slack, but the need for other, usually more sophisticated, workers is growing rapidly. Says Gail Fosler, chief economist of the Conference Board: "People are still restructuring and downsizing, but they are also hiring. There is very real concern about not getting the people you need."



Just ask Judith A. Eyerdom, human resource manager for Engineered Data Products Inc., a Broomfield (Colo.) manufacturer of components for computer storage gear. Since March, the company has been trying to staff up two new shifts in the face of a big pickup in orders. Despite bumping pay to as much as $11 an hour and rolling out a big local ad campaign, the outfit still needs a dozen welders. "We're still not getting as many as we need," says Eyerdom. Motorola, likewise, is still 1,700 workers short of its overall staffing target. Turning away 90% of applicants, it simply can't find enough hires with the math and communications skills to handle the work

Many of the spot shortages around the U. S. are for computer-related jobs such as programmers. Managers needed to run sophisticated client-server networks are in demand as well. Georgia-Pacific Corp. has been turning over rocks to find experienced information systems people. Says recruiting chief Clark Handy: "It's a very challenging market. Everybody is competing for the same people."

BOUNTIES. But you don't have to wear a pocket protector to be sought after. Atlanta is enjoying a huge building boom for residential housing and the 1996 Olympic Games—that puts construction workers at a premium. One big home builder, John Wieland Homes, is offering $100 signing bonuses for concrete layers and $250 bounties to employees who enlist experienced framers.

Another reason for shortages: geography. Sometimes the market dislocation is a matter of a few miles. Other times, available jobs and hungry workers can find themselves on opposite coasts. At the low end of the wage scale, help-wanted signs are popping up at suburban malls in much of the country, where retailers are struggling to keep up with consumer demand.

The trouble is, many of the low-skilled workers who could fill those jobs live in cities and lack easy access to the 'burbs. "If jobs are not within commuting range, you can simultaneously have unfilled jobs and high unemployment," says John D. Kasarda, a University of North Carolina specialist in labor markets for low-skilled workers. At the

posite end of the corporate food chain, executive search firms say they can't ill slots in many markets. Qualified mangers resist California, for example, because they fear the high cost of living nd the threat of earthquakes.

Principal Financial Group, a fast-growg Des Moines insurance company, has different problem. It's looking to increase headquarters hiring by 24% over ıst year, or 1,400 jobs. But with an unmployment rate of about 3%, Des oines doesn't have the labor pool Prinpal needs, especially for financial anasts and others with solid experience. the firm is spreading its net throughıt the Midwest and beyond, hiring eadhunters and throwing job fairs. The allenge: making outsiders aware of e city's growing financial service inıstry and cultural activities.

While such shortages haven't begun show up on the government's statisal radar screen, they have the inflaon-obsessed bond market worried. If mand for workers starts to outstrip pply, can wage gains be far behind?

IEGLIGIBLE EFFECT." The Clinton Adinistration has been watching the sittion closely but so far sees little to orry about. Labor Secretary Robert Reich says he has picked up hints of ot shortages—among skilled technians, for instance—but sees no sign of despread bottlenecks or wage pres-res. "There's a negligible effect on ages," Reich says.

Most private economists agree. David sler, chief economist at Nomura Secities International Inc., says he hasn't ınd much evidence that shortages are tting upward pressure on wages, eier. Despite the spot shortages, the erall supply of labor exceeds availle jobs, and in many occupations, rkers still seem reticent about asking big wage hikes. Nonetheless, Resler d others see growing demand for h-skilled workers and figure that ges for those people will rise. But t doesn't signal troublesome inflation. s exactly what you want a dynamic nomy to do," Resler says. "Build up se wages. Send a signal that certain upations are in greater demand and more people to enter them."

For all the hand-wringing about potial inflation, labor markets seem to on solid footing. Spot shortages are a all price to pay for strong gains in ployment and scant wage pressure. ides, if the idea of the odd shortage oo troublesome, just think back two rs, to the days of 7.7% unemployıt. It could be a lot worse.

By Howard Gleckman, with Sandra hison in Denver, Richard A. Melcher Chicago, Jonathan Ringel in Atlanta, bureau reports

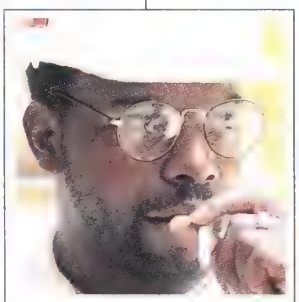
MAIN STREET COMES OUT OF ITS SLUMP, AND SPIRITS ARE UP

Few could blame June Hoey for being anxious. A single mother who's putting her third child through college, Hoey just learned she'll soon be booted out of the townhouse she has been renting. Recently, an accident with an uninsured motorist left her facing $700 in car repairs. If that isn't enough, Hoey is due to lose her $25,000-a-year job as a real estate analyst by yearend, when her employer's contract expires.

"The economy has been growing so drastically that it's due a little leveling off.... No one's panicking."

STAN B. HENSLEY
Police officer

But Hoey isn't troubled: Despite mounting bills and limited savings, Hoey says she is "fairly optimistic about the economy.... Things have really turned around in the last couple of years. I don't know of too many people who have not been able to go out and find another job."



"It's good here in Dallas. I've got a roof over my head, and I get a paycheck every week."

VAUGHN INGRAM
Telephone-line locator

Hoey's attitude isn't uncommon in Dallas. Meander down Main Street in this city's downtown and you'll encounter a surprising uniformity of opinion: The economy here is so much better than it has been in years, folks say, that there's little reason to complain. "It's good here in Dallas. I've got a roof over my head, and I get a paycheck every week," says Vaughn Ingram, an MCI Telecommunications Corp. line locator working with his crew.

That outlook appears well-founded: Nationally, unemployment is down and inflation is low. The Dallas area, left for dead in the 1980s after its oil and real estate collapsed, has seen rebounds in construction, telecommunications, and health care. Unemployment dropped to 5.3% in April, compared with 6.4% nationally.

Even signs of slowing economic growth nationally don't concern Dallas. "The economy has been growing so drastically that it's due a little leveling off," says Dallas police officer Stan B. Hensley. "[But] there's no major recession. No one's panicking."

Just one thing, in fact, rattles Dallasites: higher interest rates. Mari Acker, an administrative secretary at accounting firm Martin W. Cohen & Co., says that she and her husband have been trying to save enough money to buy a home by the end of the year. However, "if interest rates keep going up, we'll have to reconsider and wait for them to come back down," Acker says.

SMALL TICKETS. Higher rates, indeed, have some consumers rethinking purchases of big-ticket durables. Purchases of clothing, home furnishings, and other, more modest goods, though, may be on the rise. Shelley Nunnery, a credit specialist at NationsBank Corp., is using credit cards to finance the redecoration of her home. She used to pay interest rates as high as 18% to 19% on her cards. "Now," she says, "I'm getting 11% to 12%." So she's planning to spend a little bit more.

But don't look for Nunnery or her neighbors to load up on debt, as consumers did in the '80s. They realize the economic pendulum could swing back at any time. Despite a strong economy today, "You could be out of a job tomorrow," says Traci Watson, a bank clerk. For now, in Texas and elsewhere, cautious optimism is the rage.

By Stephanie Anderson Forest in Dallas

"Things have really turned around.... I don't know of too many people who have not been able to go out and find another job."

JUNE HOEY
Real estate analyst

REID HORN

DEALS

WHY SPRINT COULD AFFORD TO HANG UP ON EDS

Its alliance with French and German companies may make it a global titan

Sprint Corp. Chairman William T. Esrey certainly knows the value of keeping his options open. On June 7, just a day after the nation's No. 3 long-distance phone company admitted that merger talks with Electronic Data Systems Corp. were dead, it revealed that it was close to inking a deal with France Telecom and Deutsche Bundespost Telekom, the German phone company. The goal? To build a worldwide telecommunications giant capable of competing with globe-girding rival AT&T and with MCI Communications Corp., which forged an alliance last year with British Telecommunications.

In the end, though, doing the European deal alone could be a boon for Sprint. It would immediately give the company a big boost in the international long-distance market, which is growing by 15% annually, three times faster than in the U. S. And France Telecom and DBP Telekom are expected to pour billions in hard cash into Sprint. Contends Howard Anderson, managing director of Yankee Group Inc.: "Esrey had two prom dates, and he picked the prettier one."

Sprint isn't releasing many details of the pending pact. It says its new partners would invest in Sprint through a new class of stock and that both would get seats on Sprint's board of directors. While the partners deny that a price has been worked out, Oppenheimer & Co. telecom analyst Michael Elling predicts the Europeans will plunk down $3 billion to $4 billion for up to 20% of Sprint—about a 20% premium on the company's $13 billion market value.

CONTINENTAL CALLS. That offer may have killed the EDS talks. Both sides had billed the deal "a merger of equals." But fearing earnings dilution, Sprint insisted that its shareholders receive 1.3 shares of stock in the new company for each Sprint share—while EDS shareholders were swapped one-for-one. EDS refused to go for that. But analysts figure Esrey felt his position was strengthened by the Europeans' willingness to pay high.

Sprint and EDS could yet do a deal, of course. Sprint, for instance, may sign an outsourcing contract under which EDS would handle its billing and other data-processing operations—a deal Anderson believes would generate $6.4 billion in revenue for EDS over 10 years. EDS turn, could turn over its private t communications network to Sprin pact that could be worth $3 billion.

For now, though, Esrey will be t ing his considerable energies to mak sure his deal with the Europeans clo The former Dillon, Reed & Co. inv ment banker has a penchant for play hardball in negotiations, EDS only be the most recent example. When Sp bought cellular-telephone provider Ce Corp. in March, 1993, for instance paid only $42 a share, even though a lysts valued Centel as high as $65.

But Esrey may need this deal badly to push very hard. Sprint is ging behind MCI and AT&T internatio ly, and it lacks the domestic firepow with only 9% of the U. S. long-dista market, to expand without partners. combining with the Europeans, Sp can expect a much higher numbe calls from Germany and France to routed onto Sprint's U. S. system. Mo over, the companies could offer one-s shopping for global companies look for help in managing their far-flung vate phone networks. Sources close the deal predict a detailed annour ment by mid-June.

The pact would put Esrey firmly the road to transforming Sprint into international powerhouse. Just goes show the value of having plenty of tions to choose from.

By Kevin Kelly in Chicago and We Zellner in Dallas, with Gail Edmund in Paris

DEAL MANIA ON THE INFOBAHN

Of 14 recent Information Highway deals, four have died quick deaths. Why the potholes? Big technology deals are always hard to pull off. Cable-industry regulations also have made cable rates—and returns on investment—uncertain. Plus, cultural conflicts have caused glitches: TCI's rough-and-tumble ways clashed with the staid Bell Atlantic culture, for example. All that may bode ill for the six major deals, valued at more than $28 billion, that are still pending. Here is how major deals have fared:

—Veronica Byrd

DEAD

ELECTRONIC DATA SYSTEMS/SPRINT

MERGER CREATING $20 BILLION COMPANY

May, 1994

Talks suspended June 5 after a dispute over how to value respective operations.

EDS CEO Lester M. Alberthal, Jr

SOUTHWESTERN BELL/ COX ENTERPRISES

$4.9 BILLION JOINT VENTURE

December, 1993

New cable regulations caused Southwestern Bell to pull out.

BELL ATLANTIC/ TELE-COMMUNICATIONS

$21.4 BILLION MERGER

October, 1993

Again, parties blamed this deal's demise on uncertainties raised by new cable regulations that could hurt profits and stunt growth.

MICROSOFT/TIME WARNER/ TELE-COMMUNICATIONS

TECHNOLOGY JOINT VENTURE

June, 1993

This effort to set standards for the transmission of interactive programs fell apart after a month of negotiations.

PENDING

SPRINT/FRANCE TELECOM/ DEUTSCHE TELEKOM

INVESTMENT/JOINT VENTURE

June, 1994

The European companies plan a multibillio investment in Sprint. The three expect to join market telecom services.

COX ENTERPRISES/TIMES MIRRO

$2.3 BILLION ACQUISITION

June, 1994

Cox plans to acquire Times Mirror's cable-T operations and fold them into a new compo

HIS TIME, COX EELS IN A BIG FISH

Times Mirror deal may signal a new era of cable-TV acquisitions

eturning to his Atlanta home from a 100-mile Memorial Day bike ride, James Cox Kennedy the call he had been waiting for 1 Times Mirror Co. Chairman Robert rburu. The good news: The compa- Kennedy heads, Cox erprises Inc., had not and-out lost the bid- for Times Mirror's e operations. But rival ler Continental Cable- on was still in the . Erburu put it blunt- 'It's a dead heat." lot for long. By June Kennedy had knocked tinental out of the over by raising the 1 portion of his bid by million, to $1.364 bil- , and allowing Times Mirror a 20% e in the new Cox Cable Communica- s. The $2.3 billion package will give control of a joint venture that will the nation's No. 3 cable operator. A ted venture, run by Times Mirror, produce programming.

The consequences of the deal will be reaching. It nearly doubles the size of 's cable operation and returns much of the company's empire to public ownership. For the cable industry, it may usher in more of the megadeals prevalent before regulatory changes seemed to dampen growth prospects.

KENNEDY: RISK-TAKER

The biggest shock for stately Cox will be its return to public ownership. The company's board is dominated by the daughters of Cox founder James M. Cox, an erstwhile Presidential candidate who shared the 1920 ticket with a young Franklin Delano Roosevelt. Barbara Cox Anthony and Anne Cox Chambers have little appetite for public ownership and took the company private in 1985—after first considering a sale of everything but Cox's newspapers to General Electric Co. Before agreeing to the Times Mirror deal, "we had to think twice about the hassles of being a public company," Kennedy says. But the other publishing family in the deal, the Chandlers of Los Angeles, nixed a cash buyout because of its tax consequences.

The question now: Did Kennedy pay too dear? Analysts figure he anted up a punishing 11 times estimated 1994 cash flow for the Times Mirror properties. "What they basically did in constructing this bid was take every risk they could," says one investment banker.

HIGH FIBER. Still, the deal gives Cox considerable clout in the fast-consolidating cable industry. According to consultant Paul Kagan Associates, the new Cox Cable will have one of the industry's most efficient systems, with more than 50,500 subscribers in each of its 39 systems, 72% of them in the top 50 ad markets. Another plus: An impressive 78% of its system will be delivered over fiber-optic cable by yearend 1994. And the venture has the potential to dominate fast-growing Sunbelt markets from Phoenix to Los Angeles. "These are the best properties you're ever going to see on the market," says New York cable broker John Waller.

Kennedy, however, feels his work is far from finished. To provide programming, Cox plans to spend $100 million and Times Mirror $200 million over five years on a venture that will offer the new Outdoor Life Channel and other services. And Kennedy hopes to add another 500,000 cable customers through acquisitions, industry sources say. He also wants to ink a telephone-company alliance—though some outsiders wonder why. "They have the capacity and the financial wherewithal to go it alone," figures Brian M. Deevy, president of Daniels & Associates in Denver. Alone, that is, with thousands of new shareholders.

By David Greising in Atlanta, with Mark Landler in New York

OM/BLOCKBUSTER

LLION ACQUISITION

ıry, 1994

ı's eroding share ıakes its planned se unlikely.

Blockbuster CEO H. Wayne Huizenga

BELLSOUTH

AILLION INVESTMENT

mber, 1993

ıth anted up $1.5 billion for QVC's Paramount takeover. It now seems y to exercise an option for a $500 investment unless QVC's stock rallies.

/McCAW CELLULAR MUNICATIONS

BILLION ACQUISITION

st, 1993

ıolders have approved AT&T's w buyout, but a federal judge has blocked the deal, saying it may violate the antitrust ruling that broke up the Bell system.

BRITISH TELECOM/MCI

$4.3 BILLION INVESTMENT

June, 1993

British Telecom will get a 20% equity stake in MCI Communications. The companies plan to form a joint-venture company, in which MCI will have a 25% share, to market phone services around the world. Final regulatory approval is expected soon.

COMPLETED

BELL CANADA ENTERPRISES/ JONES INTERCABLE

$400 MILLION INVESTMENT

June, 1994

BCE bought 30% of Jones; it can buy the rest of the company in eight years. The two companies restructured the deal in March, cutting 5% from the purchase price.

NYNEX/VIACOM

$1.2 BILLION INVESTMENT

October, 1993

Nynex bought preferred stock in Viacom to help in its battle for Paramount.

Viacom's MTV

TIME WARNER/ U S WEST

$2.5 BILLION INVESTMENT

May, 1993

U S West got 25% of Time Warner Entertainment, which includes Time Warner's film studio, cable systems, and Home Box Office.

TIME WARNER/TOSHIBA/ ITOCHU

DUAL $500 MILLION INVESTMENTS

October, 1991

The Japanese companies together got 12.5% of Time Warner Entertainment.

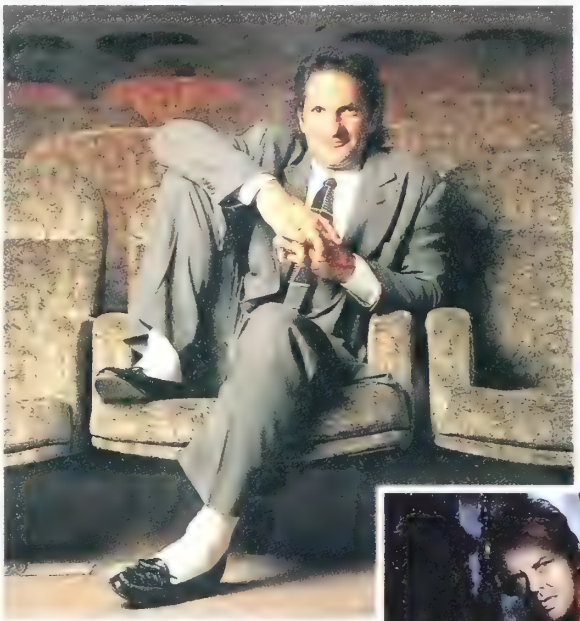
STRATEGIES

SONYWOOD BABYLON

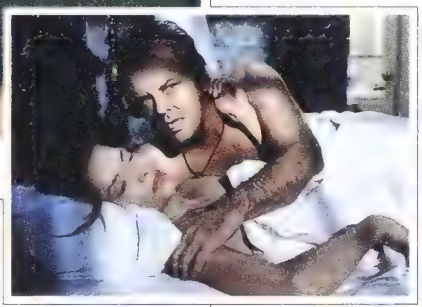
Are Columbia-Tri-Star's prospects as bad as the buzz?

In the cynical whisperland that is Hollywood, nothing is deadlier than bad buzz. And the buzz swirling around Sony Pictures Entertainment Inc. just now is very, very bad. The gossip mill says money from parent Sony Corp. is drying up, management is lining up to leave, and none of the current execs much want the responsibility of approving any films at all.

There's increasing evidence that all this rumormongering isn't merely standard Hollywood backbiting. A string of big-budget flops such as *Last Action Hero* and *Geronimo* last year sent Sony's film revenues plunging 14.8% in 1993. Box-office share for Sony's two film units, Columbia Pictures and Tri-Star Pictures, has dropped by nearly half this year. Worse yet, film production for the coming year has slowed to a trickle.



PETER AND THE WOLF: GUBER'S FLICK WON'T BE A SUMMER BLOCKBUSTER



None of this must thrill Sony, which dearly needs some real returns on the $3.4 billion it spent to buy Columbia Pictures in 1989, especially as it struggles to trim $12.9 billion in debt. Sony had big plans for its studio—especially, it hoped, as the Info Superhighway made the films and TV shows it produced all the more valuable. Indeed, as Superhighway frenzy intensified, Wall Street insiders say that Sony shopped the company for months, looking for cable or telephone companies to invest as much as $3 billion for a 25% stake. It also considered spinning off a piece of its combined film and record companies.

EXTENDED RUN? Now those strategies look hopelessly optimistic. A leading Wall Street investment banker says Sony would be lucky to get $1.5 billion for that 25% interest today, given the studio's lackluster performance and cable companies' reduced appetite for Hollywood acquisitions. And, after the studio's woes helped cut operating earnings at Sony's entertainment unit by 58% last year, there are signs that the parent's vaunted patience is wearing thin. "If last year is just a one-year dip, the fact that Sony can be patient is to our credit," says Michael P. Schulhof, president and CEO of Sony Corp. of America. "But if it becomes two years, then Sony will face some tough decisions."

For now, Schulhof pledges allegiance to the Sony Pictures team led by Chairman Peter Guber, who last year signed a new five-year contract. And the studio clearly has some likely hits in the making: On June 10, it releases the Billy Crystal film *City Slickers II*; a week later, *Wolf*, which stars Jack Nicholson as a meek book editor turned werewolf. Hollywood insiders expect both to be moneymakers, although not blockbusters. The rest of this year's schedule, though, is far more uncertain. Only *Mary Shelley's Frankenstein* is considered a certain hit.

SONY: FAR FROM BOFFO

BOX-OFFICE SALES, LESS PRODUCTION COSTS
1993 AVERAGE PER FILM, MILLIONS

UNIVERSAL	$12.1
PARAMOUNT	$11.3
FOX	$7.2
WARNER BROS.	$4.3
DISNEY	$4.2
SONY COLUMBIA AND TRI-STAR COMBINED	−$0.8

DATA: DISNEY

This, from the studio that gave America such box office hits as *Terminator 2*, *In the Line of Fire*, and *Sleepless in Seattle*? Industry executives say that the studio's management, wracked by the departures of production executives such as former Tri-Star chief Mike Medavoy and Columbia production head Michael Nathanson, has been slow in developing new projects and giving approval to make projects. Unable to make quick decisions, Sony watched as contract directors looked elsewhere: Penny Marshall directed her latest film for the Walt Disney Co., while James Brooks is negotiating to do one for Miramax Films.

QUICK SPLICES. Sony Pictures executives stressing that the company still has a strong TV production unit and theater chain, say privately that production is back on track. A revamped studio management has signed up big-budget projects starring Sean Connery, Richard Gere, and Wesley Snipes. A high-tech remake of *Godzilla* is also planned. But next year, Sony's two studios expect to release as many as 45 films—up from about 25 this year.

But holes remain. *Terminator 2* maker Carolco Pictures, a onetime Sony ally, has taken its films to MGM, while Castle Rock, which produced such hits as *When Harry Met Sally* and *In the Line of Fire*, restructured its relationship with Sony after its sale last year to Turner Broadcasting System Inc. Now Sony, which had owned 44% of Castle Rock and shared in all its revenues, will receive only about 8% of the box-office take for distributing films through 1997.

Even with the reshuffled deck, Sony USA Chief Schulhof says his company remains committed to its film unit for the long run. "This is a software business, and software businesses are cyclical," he says. "They had one bad year after three [good ones]. That's still a pretty good track record." Good enough for now. One more off year, though, and the guys in Tokyo may get restless.

By Ronald Grover in Los Angeles, with Mark Landler in New York and Larry Holyoke in Tokyo

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SHAREHOLDER ACTIVISM

REVOLT? WHAT REVOLT?

sticks to its turnaround plan

CEO ANTONINI: POOR EARNINGS AND A PLUMMETING SHARE PRICE RAISED INVESTORS' HACKLES

You would think Kmart Corp. Chief Executive Joseph E. Antonini would be scrambling feverishly to draft a new strategic plan. On June 3, after all, shareholders rebuffed a key management-sponsored restructuring proposal in one of the most astonishing investor rebellions in corporate history.

But no. As he sits on the edge of his chair for an interview at Kmart's headquarters in Troy, Mich., Antonini appears nervous and almost theatrically upbeat, but hardly repentant. He is sticking to his plan—the one rejected by investors—to sell small chunks of the No. 2 retailer's specialty stores. "Maybe there was a protest and maybe there was a misunderstanding of that particular [proposal]," he says. "There are other ways to do [it]."

That's not exactly what dissident shareholders had in mind. "We wanted to force this company to rethink their direction," says Jim Severance, portfolio manager for the State of Wisconsin Investment Board, which led the opposition that left Antonini's plan 23 million votes shy of a majority. Severance has urged Kmart to dump its specialty stores, such as OfficeMax and Builders Square Inc., and focus instead on the slumping core discount business. "Either you replace the strategy or the strategist," he says.

Indeed, Antonini faces severe pressure to turn Kmart around—whether he acknowledges it or not. Says a source close to Kmart's board of directors: "I hope we can save Joe, but it's a tough job he's got." After posting record sales and profits in 1992, the huge retailer has stumbled badly. Last year, Kmart lost $328 million, before extraordinary items, on sales of $34 billion (chart). Profits declined 69%, to $18 million, in this year's first quarter. The poor earnings have put in jeopardy a crucial $3.5 billion store-renovation program.

DOOR-SLAMMER. All that and a plummeting share price have inspired investors' ire. Wisconsin's Investment Board hired a proxy solicitor to gather support, and other prominent investors, such as the College Retirement Equities Fund, publicly joined the revolt. On the eve of the annual meeting, nervous Kmart officials began calling big shareholders, asking them to reverse their votes. In the end, though, 108.6 million shares were cast against the management, including many of the 19 million shares held by employees. Another 28% of the 416 million total didn't vote at all. "It was worse than we predicted," concedes John Wilcox, chairman of Georgeson & Co., Kmart's proxy solicitor.

Will the vote spark change? One source close to the board termed the result "a wake-up call," and spoke of the need to recruit new executives from [illegible] side the company. Others [illegible] least publicly, appear [illegible] complacent: The vote was [illegible] "a communications proble[illegible] says director Donald S. [illegible] kins, former chairman of Je[illegible] Cos.

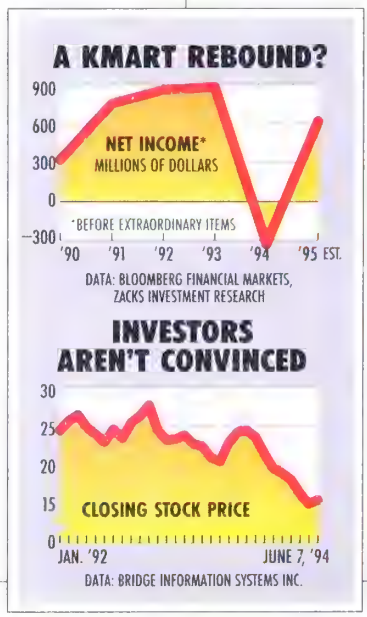
It's more than that. [illegible] shareholders' no vote shut [illegible] door on a stock sale that co[illegible] have raised up to $900 milli[illegible] As a result, Kmart could [illegible] desperately short of cash [illegible] late this year. Antonini pl[illegible] to spend $1.3 billion in 199[illegible] expand and spiff up dowdy [illegible] stores. If he proceeds, figu[illegible] Maureen M. McGrath, an a[illegible] lyst at Smith Barney She[illegible] son Inc., this year's cash f[illegible] will be $111 million below [illegible] penses; next year, she sa[illegible] the crunch "becomes critica[illegible]

Antonini believes he can [illegible] er the shortfall by increas[illegible] sales and cutting costs. Km[illegible] recently began restocking [illegible] shelves in its 2,400 discount stores af[illegible] hours. In test stores, that hiked sa[illegible] between 2% and 3%. Similar chan[illegible] should help lift profits $600 million[illegible] $800 million over the next 24 months,[illegible] says.

If those efforts fall short, howev[illegible] Antonini faces several bitter optio[illegible] Cutting the dividend for the first time[illegible] 32 years would be like pouring gasol[illegible] on shareholders' smoldering discont[illegible] Borrowing money would be extrem[illegible] expensive, given the company's B[illegible] plus credit rating. He could raise $3 [illegible] lion by selling Kmart's specialty sto[illegible] outright, figures Michael B. Exstein, [illegible] analyst with Kidder, Peabody & [illegible] However, that wo[illegible] repudiate a decade-l[illegible] diversification strate[illegible]

Kmart directors [illegible] chew over the optio[illegible] when they next m[illegible] on June 21. As th[illegible] mull a decisive char[illegible] of course, they wo[illegible] be wise to keep an e[illegible] on Wal-Mart and T[illegible] get, which are pois[illegible] to overrun Kmart's [illegible] maining strongholds [illegible] Kmart continues [illegible] flounder, there'll be l[illegible] and less for shareho[illegible] ers to fight over.

By David Woodruff in Troy, Mich., and Judith H. Dobrzynski in New York



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STEEL

DOWN AND DIRTY IN THE STEEL BELT

National, in a Darwinian struggle with USX, blatantly raids its rival

Thomas J. Usher, president of U. S. Steel, was talking to his secretary on the afternoon of May 31 when the first fax arrived. It relayed a one-line resignation from V. John Goodwin, manager of the company's most important plant, U. S. Steel's Gary (Ind.) works. Stunned, Usher asked his secretary to get him the No. 2 at Gary, David L. Peterson. But while she was hunting for him, a second fax arrived—with Peterson's resignation. On it went, with Nos. 3 and 4. By the next day, a fighting-mad Usher had seen the entire five-man leadership at Gary—plus a sixth recently retired manager—defect to Japanese-owned National Steel Corp.

U. S. Steel Group, a division of USX Corp., promptly sued National Steel, its Japanese owner NKK Corp., and the defecting managers—accusing them of "an insidious raid" designed to "cripple" the nation's No. 1 steelmaker and steal its trade secrets. But at hearings on June 6 and 7 at Indiana's Lake County Courthouse in Hammond, Usher and his lawyers vented more steam than evidence, and their request for a preliminary injunction against National was denied. Goodwin and team, meanwhile, quickly took charge of the ailing No. 4 integrated-steel company.

More raids could be coming, as the steel industry moves into a new, down-and-dirty era. Competitors have already lured away key plant managers from ultra-efficient minimill operator Nucor Corp. Now, PaineWebber Inc. analyst Peter F. Marcus foresees a "death spiral" for high-cost producers such as National—unless they improve fast. In this climate, Pittsburgh's genteel tradition of refraining from raiding rivals is kaput. "We have a one-word vision, and it's called survival," says Goodwin, who on June 1 replaced Ronald H. Doerr as National's president.

Survival was certainly the concern for NKK's owners in Toyko. Since buying control of National in 1984, they have plowed $2 billion worth of new equipment into the $2.4 billion company, signed a trend-setting labor-management pact, and waited for a turnaround. It hasn't come. Instead, despite last ye[illegible] recovery in steel, National slid furt[illegible] into the red (chart). Productivity pl[illegible] meted. And as Japan's recession r[illegible] aged NKK's home market, pushing [illegible] company to a pretax loss of $736 mil[illegible] for the year ended in March, NKK's [illegible] tience wore thin. In February, To[illegible] told the president of NKK America I[illegible] Yoshitaka Fujitani, to start head-hunti[illegible]

Goodwin was a logical target. The [illegible] gar-chomping 50-year-old had come[illegible] the Gary works in 1987 following a [illegible] ter lockout and had quickly smoot[illegible] labor relations, turning a disaster o[illegible] mill into one of the world's best. G[illegible] now produces 6.6 million tons annua[illegible] more than half of U. S. Steel's total [illegible] has won top quality awards from [illegible] troit and boasts productivity of only [illegible] man-hours per ton—30% better t[illegible] both the U. S. and Japanese averag[illegible]

Despite this success, the Japan[illegible] knew that Goodwin, who had mis[illegible] a promotion to Pittsburgh, [illegible] growing antsy. "We had a hint t[illegible] he was looking for a job," says N[illegible] York-based Fujitani.

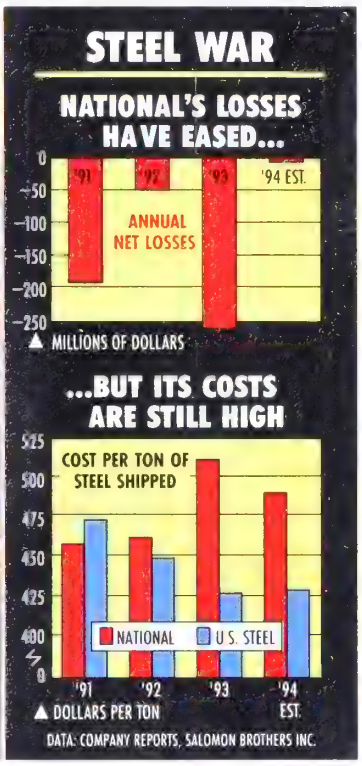
HOUSE OF USHER. In late Februa[illegible] Goodwin flew to Washington fo[illegible] secret meeting with Fujitani [illegible] Donald F. Barnett, a Virginia st[illegible] consultant. Later, in March, he [illegible] in Chicago with two of Nation[illegible] five Japanese board members: K[illegible] ichiro Sekino and the chairman, C[illegible] mu Sawaragi. They spoke throu[illegible] an interpreter, discussing Nation[illegible] woes. It was at another Chica[illegible] meeting on Kentucky Derby d[illegible] May 7, Goodwin recalls, that [illegible] asked them if they would be int[illegible] ested in the rest of his team. Th[illegible] said yes. Despite widespread an[illegible] in Silicon Valley over Japan[illegible] hires, Fujitani maintains that [illegible] raid was business as usual. "J[illegible] hopping is prevalent in the Uni[illegible] States," he says.

On May 31, Goodwin was driv[illegible] back from Chicago to Gary when [illegible] heard on his car phone that his [illegible] tire team had jumped. He knew Us[illegible] would be livid. Later that night, Go[illegible] win offered to help with the transiti[illegible] but, he says, "we both decided that [illegible] would be better for me to clean my d[illegible] and hit the road."

What now? Goodwin says he plans [illegible] study National before he announ[illegible] changes. But he knows time is sho[illegible] National's Tokyo-controlled U. S. boar[illegible] both impatient and bold. That's a vola[illegible] mixture—as he and Tom Usher ha[illegible] just discovered.

By Stephen Baker in Pittsburgh, w[illegible] Nancy Pieters in Hammond, Ind.

NATIONAL'S JAPANESE OWNERS HAVE INVESTED $2 BILLION



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BANKING

THE GRAY AND THE BLUE

Seniors are fuming that they were misled by banks' brokerage units

Three years ago, Muriel B. Cottrell came to Puget Sound Bank with a portfolio of nearly $100,000 in blue-chip stocks. On the advice of a salesman with the bank's brokerage operation, the 74-year-old widow sold the stocks and invested the proceeds in a U. S. government-securities mutual fund. But Cottrell says she was misled about how much her income from the fund would fluctuate—and about how much she'd owe in fees and taxes.

Now, Cottrell is fighting back. In March, she filed a complaint with the National Association of Securities Dealers against the brokerage, hoping to recoup about $21,000—the taxes and fees she paid plus interest. "I was just as green as grass," she says.

KeyCorp, which last year bought Puget Sound Bank, declines to comment on the case. But the banking industry clearly is worried by such complaints. Assets of proprietary bank mutual funds have exploded, reaching $218 billion this year (chart). Now, the other shoe is dropping—in the form of disgruntled investors who say they never understood the risks involved. The Comptroller of the Currency reports about 40 complaints so far this year, up from 14 for all of last year. And in the wake of this spring's market correction, securities regulators in such states as Texas and Florida say they are starting to hear from bank customers who insist they didn't realize that their funds could go down.

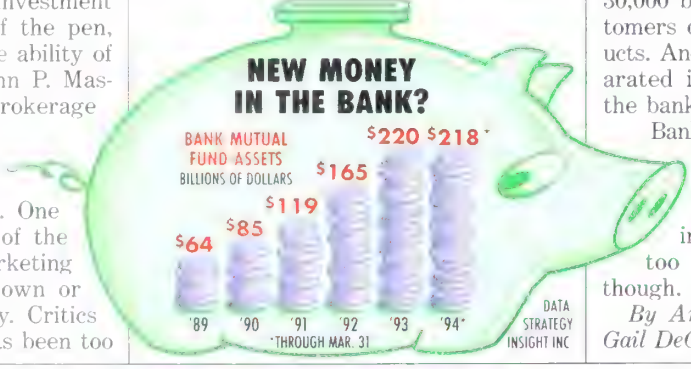
SHORTER LEASH? If more widows such as Cottrell complain that their life savings have been jeopardized, banking officials fear, Washington could act to tighten restrictions on bank investment activities. "With a stroke of the pen, legislators could wipe out the ability of banks to compete," frets John P. Mastriani, head of KeyCorp's brokerage operations.

Commercial banks have charged into investment products in the past decade. One result: Today, almost 3,000 of the nation's 11,000 banks are marketing mutual funds, either their own or those of an outside company. Critics charge that the expansion has been too aggressive. Many bank customers have switched funds from certificates of deposit or other insured vehicles into investments they didn't realize could lose money. After all, such transactions occur in institutions backed by the federal government. Colorado Securities Commissioner Philip A. Feigin says many customers are elderly, with little experience in market investments. "How could there not be complaints?" he asks.

In some cases, banks are trying to resolve problems early—and keep them quiet. One retiree from a small town in Maine, who asked not to be identified, says his local bank paid him the $4,000 plus interest he lost on a stock-and-bond fund last year after he complained he hadn't been told of the investment's risk.

But some squabbles are going public. In April, R. C. Hilton, a Tampa realtor, ran ads in the *Tampa Tribune* and *St. Petersburg Times* seeking others who have had problems with investments at Barnett Banks. Hilton had filed a complaint in December with Florida regulators contending that a Barnett employee persuaded him to transfer $50,000 in insured funds into a mutual fund without explaining that he could lose his principal. In a letter to the agency, which found no cause for action, Hilton says he lost nearly $3,400. Hilton won't say if he plans to sue.

HILTON SAYS HE WAS TALKED INTO MOVING $50,000 IN INSURED MONEY INTO A MUTUAL FUND—AND THE RISKS WERE NEVER EXPLAINED. HE CLAIMS TO HAVE LOST $3,400



Barnett officials won't comment on Hilton's situation. But Barnett's chief retail-banking exec, Tom Johnson, admits that some consumers are confused. In response, Barnett now employs "mystery shoppers" to ensure that brokers adhere to disclosure requirements. "It's not good for us to have an unhappy customer," he says.

UNDERCOVER. Among other things, unhappy patrons attract political scrutiny. The Federal Deposit Insurance Corp. plans to send undercover customers into banks to determine if they are giving investors adequate information. Securities & Exchange Commission officials say they, too, are taking a closer look at banks' sales practices. And bankers are particularly nervous about a bill introduced in October by House Banking Chairman Henry B. Gonzalez (D-Tex.) that would bar the use of a bank's name and logo on most mutual-fund offerings.

Bankers argue that the industry has addressed many of the critics' concerns. Wells Fargo & Co. has placed signs showing the FDIC logo with a red slash through it on desks where uninsured investment products are sold. This month, KeyCorp will begin training its 30,000 bank employees to educate customers on the risks of uninsured products. And many banks have already separated investment-product sales from the bank lobby by glass walls.

Bankers are hoping such moves will head off a possible groundswell of resentment from consumers—as well as the growing agitation in Washington. It's too late to stop Muriel Cottrell, though. She'll keep on fighting.

By Amy Barrett in Washington and Gail DeGeorge in Miami

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EDITED BY KEITH H. HAMMONDS

PAINEWEBBER ANTES UP

Investors in PaineWebber's Short-Term U.S. Government Income Fund spent much of this year watching their fund sink almost 6%. But as of June 7, the fund's shell-shocked, conservative investors can rest a bit easier: PaineWebber says it expects to inject $33 million into the $1 billion bond fund to offset big losses from volatile mortgage-derivative securities. It will also pay about $50 million to buy the remaining mortgage-derivative securities from the fund, which is managed by a subsidiary. The brokerage's remarkable actions come as part of an agreement in principle to settle class-action litigation brought on behalf of fund investors. PaineWebber also removed the fund's manager pending a review.

WILL THE UNITED BUYOUT STILL FLY?

For John Neff, United Airlines' second-largest shareholder, it was the final 2% that broke the camel's back. Neff, the manager of Vanguard/Windsor Fund, says he will vote his 9.7% stake against the rejiggered $4.1 billion buyout of United. Originally, that deal called for employees to get a 53% equity stake in return for $5 billion in wage and benefit concessions. But last month, UAL sweetened the deal, raising employee ownership to 55%. Neff says the move "ruined my vacation." He won't be able, acting by himself, to defeat the deal, which is likely to be submitted to a shareholder vote in July. Alliance Capital Management, now UAL's largest holder with 12%, still supports the buyout, sources say.

LETTING THE AIR OUT OF AIR TRAVEL

It's a revelation: Get rid of frequent-flier miles, negotiate agency fees—and business air travel just might get cheaper. Business Travel Contractors, a suburban Philadelphia consultant, is floating a plan that proposes just that. And some big companies are taking it seriously. BTC, founded by former CIGNA travel managers, wants to broker contracts between airlines and companies that would cut fares by stripping out marketing expenses. Fifteen employers, among them Bell Atlantic and Merck, are funding the firm's efforts. Some industry officials, though, say the plan could be a long time off. It requires an antitrust O.K. from the Justice Dept. and will need the support of airlines and travel agencies.

CLOSING BELL

LIVING ON CAKE

When Sara Lee announced a long-awaited restructuring on June 6, its beleaguered stock barely budged. Analysts cheered the 8,500 job cuts but pointed out that it may be years before the benefits flow to the bottom line. Meantime, fashion trends are working against sheer hosiery such as Sara Lee's L'eggs. And fleece sweats have become a commodity business, a blow to its Hanes brand. Chairman John Bryan is curbing acquisitions to focus on beefing up returns, and some analysts hope he'll divest one of the company's surging food operations. For now, though, cheesecakes and sausages pay the bills.

DATA: BRIDGE INFORMATION SYSTEMS INC

HEADLINER

SAATCHI SACKINGS

Five months after Bill Muirhead took over the troubled North American operations of Saatchi & Saatchi, heads are beginning to roll. On June 2, Muirhead dismissed Harvey Hoffenberg, creative chief of the British advertising agency's New York office. Another senior executive, Richard Pounder, quickly resigned.

With Hoffenberg gone, say agency insiders, Muirhead can get on with overhauling a shop that has suffered from a dearth of new business and a lackluster creative reputation. He has organized a task force that will conduct a top-to-bottom study of the agency. And he has appointed Stanley Becker, 5[illegible] popular Saatchi veteran [illegible] currently oversees its To[illegible] Motor account, to restore [illegible] rale in New York and lead[illegible] search for a replacement [illegible] Hoffenberg.

One thing [illegible] the Australi[illegible] born Muirh[illegible] has not d[illegible] however, is[illegible] force Europ[illegible] born mana[illegible] ment on S[illegible] chi's U[illegible] executives. Altho[illegible] he used to run Saat[illegible] European operations and [illegible] said he would like the N[illegible] York office to function m[illegible] like its London sister, M[illegible] head is relying so far on ho[illegible] grown talent—such as B[illegible] er—to implement his chan[illegible]

By Mark Lan[illegible]

WEILL AND ZARB PART COMPANY

Sandy Weill has lost a top lieutenant: Frank Zarb, vice-chairman of Weill's Travelers, said on June 7 that he would become chairman of insurance broker Alexander & Alexander Services. Zarb, who says Weill "is still my best friend," wants results fast. That won't be easy: A&A is struggling. It lost $4.4 million in the first quarter. It's out of compliance with a long-term credit line and faces steep litigation costs and high overhead. The good news: It won a $200 million cash infusion from American International Group, which bought 21% of A&A's nonvoting stock.

INTEL AND HP CHIP IN ON DESIGN

Just as IBM's PowerPC chip starts to threaten Intel's death grip on the microproces-

sor business, Intel has str[illegible] back in a big way. On Jun[illegible] the maker of chips that [illegible] most personal computers [illegible] it would work with Hew[illegible] Packard in designing a [illegible] generation of silicon bra[illegible] The two plan to merge t[illegible] chips into a design that [illegible] run everything from PCs [illegible] large computers. They say [illegible] chips will outrun rivals' [illegible] still work with software w[illegible] ten for both HP's speedy [illegible] chips and Intel's Pentium. [illegible] chips won't be out unti[illegible] least decade's end.

ET CETERA . . .

- Seymour Cray may run [illegible] of cash by mid-June. He [illegible] hasn't sold a computer.
- Japan's NHK television [illegible] work will switch to U[illegible] made high-definition syste[illegible]
- Construction comeback: [illegible] erpillar doubled its divid[illegible] and will split its stock.
- A Miami federal court [illegible] quitted W. Christopher [illegible] ry of failed S&L CenTrust[illegible]

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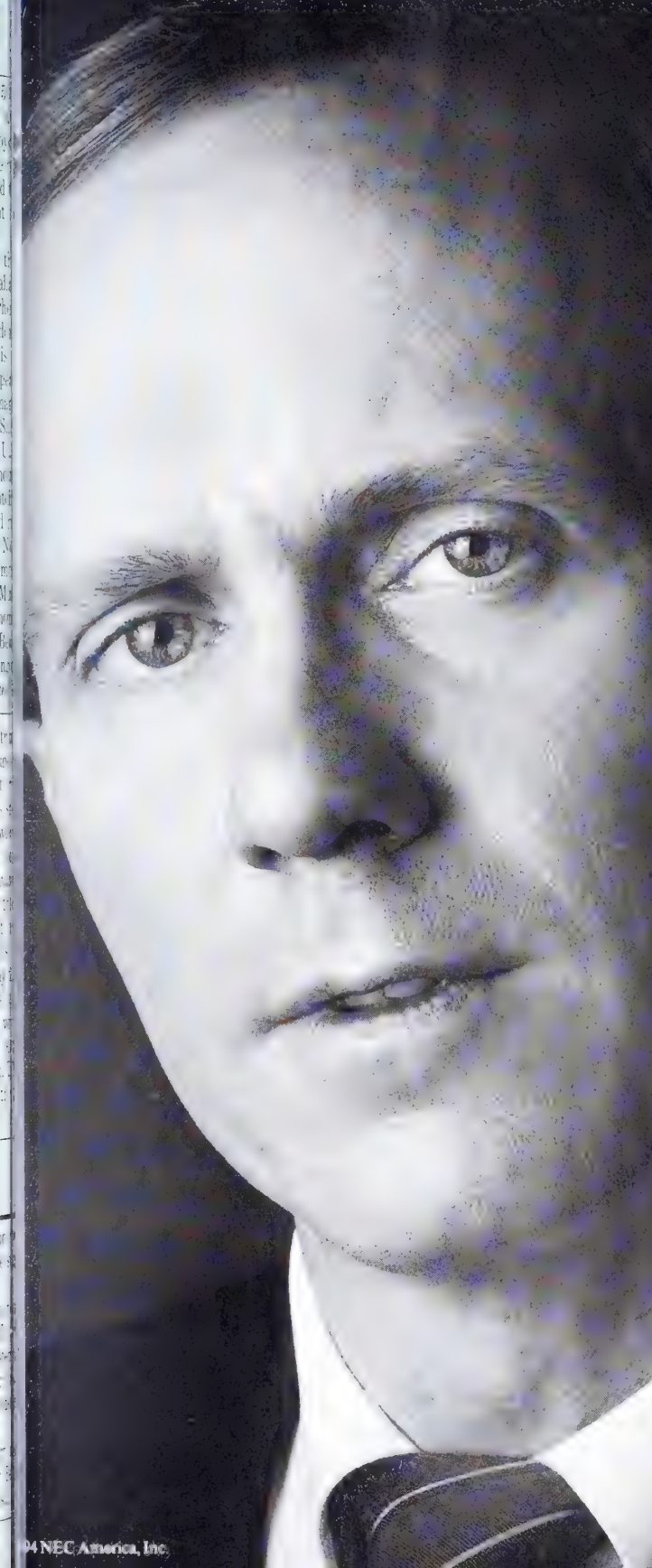

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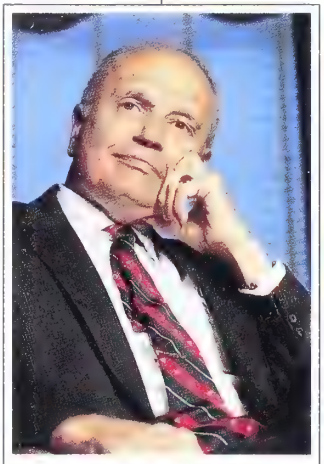
EDITED BY OWEN ULLMANN

HE CLINTONITES' NEW QUAGMIRE: UBSIDIES FOR HIGH TECH

n contrast to the Administration's foreign and domestic policy stumbles, President Clinton's technology policy is a hit with most business leaders. The White House has impressed them with an ambitious set of research and development subsidies aimed at boosting industrial competitiveness. iatives range from developing superefficient clean-burning to jump-starting the U. S. flat-panel industry, and more is he way. The Administration wants to spur innovation in hidebound construction industry and aid elopment of "green" technologies.

ut now, even this bright light could flicker ause of a tough dilemma: How to ensure subsidies benefit Americans, not their f economic rivals, Europe and Japan. For mple, should Uncle Sam help U. S.-based panies develop products that might be manfactured overseas? And does it make sense to port R&D of foreign companies with U. S. its? "It's a burning issue that comes up in y one of our technology programs," says a te House science official. A bad decision d lose Clinton his high-tech supporters—cost business the global markets the policy pposed to snare.



DINGELL: WON'T BACK OFF

RREACHING? The issue is coming to a head, Congress the battleground. The House Senate have passed different versions of National Competitiveness Act, which authorizes $1.9 billion technology support, including a doubling for the Comce Dept.'s Advanced Technology Program, to $400 million. bills differ in how they protect U. S. interests. The Senate ly requires that the "principal economic benefits accrue to U. S." But a more restrictive House measure, promoted by rgy & Commerce Committee Chairman John D. Dingell Mich.), demands that most products developed with federd be produced in the U. S.

xecutives complain that the House version is rigid and overreaches by using high-tech handouts to correct trade abuses: One provision bars U. S. subsidiaries of foreign companies from Uncle Sam's largesse if the parent countries have closed procedures for setting technical standards, a common ploy to favor native manufacturers. Not only would that cost the U. S. jobs, fumes IBM policy spokesman Mark Holcomb, "but we run the risk of retaliation." Holcomb fears companies would lose more from being kicked out of European technology subsidy programs than they'd gain from participating in Clinton's projects.

Indeed, the Dingell-backed amendment could sour much of U. S. industry on its high-tech venture with government. "If it stays in, we will oppose the whole bill," warns William G. Morin, tech-policy chief of the National Association of Manufacturers.

Not surprisingly, the Administration wants Dingell to back off. But Clinton dares not push too hard for fear of losing the powerful chairman's support for health-care reform. And so far, Dingell vows to stand firm. He has been on the warpath ever since the U. S. Advanced Battery Consortium, a government-business partnership, awarded $38.1 million to the U. S. subsidiary of a French company. Now, he insists that limiting participation in federal technology programs to true-blue American companies is nothing short of a patriotic duty.

The debate over how to define U. S. interests should be settled this summer as House and Senate conferees hash out differences between their bills. But the underlying issue won't go away. The Administration's top economic and technology hands are still searching for a solution that satisfies U. S. companies, Congress, foreign rivals, and American taxpayers. If they don't find one, the President's technology plan could alienate the very industries it's trying to advance.

By John Carey

ITAL WRAPUP

E BUDGET

Congress has been slugging it out for years over ways to cap spending. But one huge cause of the budget icit is often ignored: tax loopholes. cording to a new General Account- Office report, special-interest tax aks will cost the Treasury $400 bil- in revenue this year—twice the icit. And while spending for defense many domestic programs is fro-, tax breaks keep growing at a 4% ual clip, after inflation. Now, the and the Office of Management & dget hope to curb the revenue drain turning a spotlight on the loopholes. d House Ways & Means Committee member William J. Coyne (D-Pa.) is pushing the panel to review the breaks as a way to reduce the deficit.

HEALTH CARE

It may not have a catchy name, but Corporate America has found a health-care-reform issue to rally around: "national uniformity." Bills emerging in Congress would give states more power to regulate health care, a threat to big corporations that prefer operating under consistent federal rules. Executives from nine trade groups and more than 30 companies will swarm up Capitol Hill on June 23—dubbed "Uniformity Day"—to make a pitch for national standards.

THE WHITE HOUSE

Bob Woodward's new book about the Clinton White House, *The Agenda*, portrays an indecisive President with a volcanic temper and an economic team at war with his political advisers over deficit reduction in '93. So why are Clintonites relieved? Because the journalist of Watergate fame finished his account before staffers began brawling over health-care reform last fall: Hillary Rodham Clinton wanted a plan that economic advisers considered wildly extravagant. "The fight over health care was much worse than the budget," says one top Clinton adviser. "It got ugly."

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EUROPE

SOMETHING'S ROTTEN IN FRANCE, SPAIN...

Tougher laws uncover fraud and corruption across the Continent

Life in a Brussels jail cell was no doubt a frustrating experience for Didier Pineau-Valencienne, the chairman of France's Schneider, who was finally released on June 7 after 11 days of incarceration. But as he passed the time awaiting a judge's investigation of questionable financial dealings by teaching English to jailmates, the French executive had lots of spiritual company in the outside world.

All over Europe, execs are in trouble with the law. Whistle-blowers and prosecutors have launched a slew of probes into shady practices, which they claim are on the rise in European business. Indeed, Pineau-Valencienne had barely hopped a flight back to Paris when German authorities slapped four executives of Balsam, maker of sports-arena floors and Astroturf, into preventive detention. The four are under investigation for a $1 billion credit fraud against German factoring company Procedo, which has ties to Europe's big banks.

There's reason to think the list of fraud-and-corruption cases will grow. Whether or not Europe's business morality is fraying, its securities laws a stiffening, judges are growing ira small shareholders are crusading f their rights, and the business press becoming more aggressive. As a resu Europe's long tradition of burying bu ness abuses is ending, believes Rober Artoni, a former member of Italy stock-exchange watchdog agency. "T dam has broken," Artoni says.

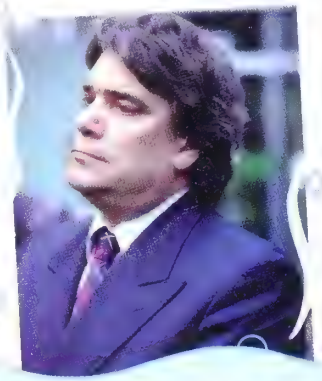
DISAPPEARING ACTS. That portends healthy cleansing for European indu try. Companies should ultimately bene by more easily attracting capital fr foreign institutional investors—who a often put off by opaque European fina cial practices and murky business re tionships. But until tighter controls their work and greater transparen comes, European business faces an u settling period of accusations and casca ing legal actions. The chill is rippli through executive suites. "You see pe ple you knew—who were your contacts suddenly disappear," laments Deutsc Bank Chief Executive Hilmar Kopp One such acquaintance is fugitive Ge man developer Jürgen Schneider, su

EUROPEAN EXECUTIVES IN HOT WATER

Across Europe, the spotlight is glaring on opaque financial practices and murky business relationships. In the process, some big-nam managers are finding themselves in the midst of scandal. Some recent examples:

DIDIER PINEAU-VALENCIENNE
CHAIRMAN, ELECTRICAL-EQUIPMENT MAKER SCHNEIDER, AGE 63
Shareholder complaints on acquisition prices led to Belgian charges of financial fraud. Has been released from jail on bail of $437,000.

PIERRE BERGE
PRESIDENT OF FASHION HOUSE YVES SAINT LAURENT, AGE 63
French prosecutors charged him in May with insider trading for selling YSL shares before last year's takeover by Elf Sanofi.



BERNARD TAPIE
INVESTOR, AGE 51
Fined by France's bourse regulator recently for filing false data on scalemaker Testut. Faces a parliamentary probe of his Crédit Lyonnais borrowings.

JURGEN SCHNEIDER
PROPERTY DEVELOPER, AG
On the run after bankrup disclosed $3 billion in d warrant has been issued arrest for alleged falsific of documents and tax ev

PRESS: P. BALARD/EDITING PICTURE POINT ILLUSTRATION BY ALBERTO MENA/BW

ected of bilking Deutsche Bank and mpetitors of perhaps $3 billion (no re- tion to French electrical-equipment aker Schneider).

There may be political fallout as well. oney-grubbing by politicians already s tainted leaders in France and Spain d toppled Italy's government. As the otlight refocuses on business execu- ves—who often are linked to politi- ns—the damage could be devastating. me Paris observers see political mo- es behind a number of probes linked French Socialist leaders.

Beyond the Belgian and German cas- , managers who will face judicial scru- y include the four top officers of Me- obanca, a powerful Milan bank. On ay 31, Ravenna magistrates issued its of investigation into Mediobanca's s with the scandal-ridden Ferruzzi oup—now in Italy's version of Chapter . Former Ferruzzi officials claim the nk was privy to Ferruzzi's political ish funds and phony balance sheets.

Italy may be Europe's corruption ampion, but cases of fraud, embezzle- nt, and lesser wrongdoing are emerg- almost weekly in France, Germany, ain, and elsewhere. They range from eged fraud in the collapse of financial lding company Sasea—the biggest nkruptcy in Switzerland's history—to sider-trading charges filed in late May ainst Pierre Bergé, head of French shion house Yves Saint Laurent.

Securities watchdogs with sharper teeth are a clear cause of Europe's mounting rap sheets. New powers at France's bourse regulator have helped it triple the number of cases it sends to court since 1990. In Germany, insider trading still isn't a crime, but recent scandals have prompted Bonn to dust off a long-promised bill to make it an offense. The bill is still pending.

As more links among European managers and politicians emerge, the fallout could be devastating

A budding militancy among small shareholders across Europe is helping drag executives into court, too. Their complaints against the low price Schneider offered them for stock in two of its subsidiaries touched off the Belgian probe that landed Pineau-Valencienne in jail. A new German law taking effect on July 1 will expand protection for minority shareholders.

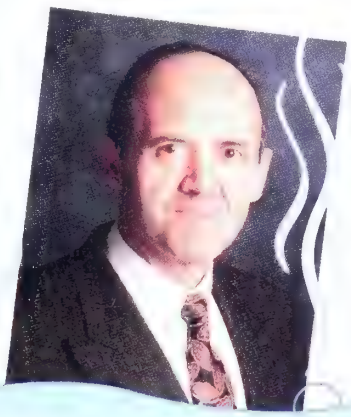
"WILD WEST CAPITALISM." More watchdogs and tougher laws aren't the only reasons for Europe's rash of prosecutions. Experts insist there are more white-collar lawbreakers to chase. The Continent's deep economic crisis is one reason. Recession flushes out fraud—as in the case of bankrupt German developer Schneider. Bad times also tempt managers "to commit fraud to hide their business problems," says Tommy Helsby, senior managing director in Germany of Kroll Associates Inc., a U. S. business sleuth.

For many outraged Europeans, the flood of scandal stems from moral decay. Indeed, suggests Pierre Lellouche, a conservative member of France's Parliament, the moral state of European business is reminiscent of the go-go 1980s in the U. S. He thinks Europe's march toward freer markets has lacked necessary controls. "There's lots of drug money around, and people are playing financial games," he says. "Wild West capitalism has come to Europe."

France's Pineau-Valencienne might apply the go-go comparison to European judges and prosecutors. Free on $437,000 bail, he has been indicted for false accounting and other fraud at Schneider's Belgian units—charges he denies. Whatever his guilt or innocence, his case is a striking example of change in the way Europe deals with white-collar crime. Corporate brass who are tempted to cut legal corners should draw a lesson: It may be lonely at the top, but it's even lonelier in the slammer.

By Stewart Toy, with Gail Edmonson, in Paris, John Rossant in Rome, Peggy Salz-Trautman in Bonn, and Patrick Oster in Brussels

(L TO R) PHOTOGRAPHS BY MICHAEL LANGE-WOLFGANG SCHNHOFER FOCUS/MATRIX



Z SCHIMMELBUSCH
) OF MINING
NGINEERING GIANT
.GESELLSCHAFT, AGE 49
investigated by German cutors for tax evasion and alleged misdeeds. He s any wrongdoing.

JOSE IGNACIO LOPEZ de ARRIORTUA
PURCHASING AND PRODUCTION DIRECTOR OF VOLKSWAGEN, AGE 53
Ex-employer GM claims he stole industrial secrets, such as model plans and supplier prices, which López denies.

ENRICO CUCCIA
HONORARY CHAIRMAN OF MEDIOBANCA, AGE 86
Under investigation along with three other officers for financial irregularities. Could be a big blow to Italy's most powerful banker.

MARIO CONDE
EX-CHAIRMAN OF BANESTO, AGE 45
The Bank of Spain is accusing him of using questionable accounting practices to inflate Banesto's profits.

DATA: BUSINESS WEEK

WHO CLEARED THESE AIRLINES FOR TAKEOFF?

Safety is a disgrace in China, Russia, and India—and the U.S. may cash in

HIJACKING EPIDEMIC: A CHINA SOUTHERN JET AFTER IT WAS TAKEN TO TAIWAN

It was the worst day in China's aviation history. On June 6, a China Northwest Airlines plane crashed after takeoff from the city of Xian, killing all 160 on board. On the same day, a lone hijacker commandeered a China Southern Airlines plane to Taiwan, the 12th hijacking in the past year.

With such a dismal safety record, China is a leading contender for the title of the most dangerous place in the world to fly. Also in the running are India and Russia. The record is so frightening that the U. S. has intervened, sensing an opportunity to improve safety standards—and promote American exports to boot.

The air-safety mess is partially a result of the end of government-run air monopolies (table). China now has about 40 airlines. Several new air taxis have begun challenging India's domestic carrier. In the former Soviet Union, Aeroflot has been hacked into 200 smaller companies. Many of the airlines are too new to have developed a good track record for maintenance or safety.

China's biggest problem is a shortage of pilots. Passenger air travel is expected to grow 20% annually until the year 2000. To keep up with demand, the country needs 600 new pilots a year. But China can turn out less than half that number. Once a pilot is on the job, the workload is excruciating. Although Chinese regulations set the limit at 100 hours of flight time a month to avoid pilot fatigue, pilots average an astounding 280 hours.

In Russia, fuel shortages and flight cutbacks mean pilots are often grounded. As a result, their skills get rusty. "Many pilots aren't flying for a month or more," says Valentin Presnyakov, vice-president of the Russian pilots union. At least 200 people have died in Russian plane crashes this year. On May 18, pilots struck to protest poor safety. They threaten another strike this month.

Compared with China and Russia, India had a late start in deregulation. In March, India paved the way for private-sector shuttles to become full-fledged airlines. The same month, a private carrier's Boeing 737 slammed into a jet on the runway in New Delhi, killing eight people. The government suspended another carrier days later, citing four safety violations in a year.

The Clinton Administration wants more done to promote safety. The FAA opened an office in Beijing in January and is increasing the U. S. presence in East Asia and Russia. Meanwhile, American motives are not totally pure: The Clintonites want countries to adopt U.S. safety standards—and then buy U.S. equipment. Says one Administration official: "If you can control standards, you can control trade." Next month, the Commerce Dept. will brief 100 U.S. aerospace companies, including Boeing Co., McDonnell Douglas Corp., airline designers, engine makers, and producers of air-traffic-control equipment on how to snag Chinese contracts.

"REALLY TRYING." Beijing has made some gestures toward cleaning up its act. Last year, it denied requests to start 12 new airlines. China has also dropped its demand on foreign ownership of airlines and airports. By allowing foreigners to own minority stakes and help launch new carriers, the Chinese hope to improve service. "They are really trying from the top down," says Stephen Miller, managing director of Trinity Aviation, an aircraft leasing and consulting company in Hong Kong.

Despite the potential safety problems, foreign investment banks have been slugging it out for the right to underwrite listings of two Chinese airlines that plan to list on foreign stock exchanges this year. Goldman Sachs is the lead underwriter for China Southern Airlines, and Morgan Stanley is underwriting China Eastern Airlines. The Chinese and Russians are also enlisting help to improve staff and facilities. In February, Northwest Airlines Inc. signed a contract to train 250 Chinese pilots. Boeing provides training for Chinese pilots and air-traffic controllers. And in Russia, Pratt & Whitney has a joint-venture deal to develop jet engines.

The foreigners are in for the long term. With huge land masses, the giants of the emerging markets have few alternatives to developing their aviation industries. As bad as air travel is in China, other forms of transportation are no better. The trains are overcrowded and accident-prone. Poor road conditions make travel by car and bus hazardous. "What's worse than flying?" asks Eckes. "Everything else." For the developing world's frequent fliers, that's cold comfort.

By Joyce Barnathan in Hong Kong, with Peter Galuszka in Moscow and Christina Del Valle in Washington

WHERE FLYING IS HAZARDOUS

CHINA Monopoly carrier replaced by 40 airlines. As air travel grows 20% a year, pilots are badly overworked. Security is lax, with 12 planes hijacked to Taiwan in the past year.

INDIA Several new airlines are challenging the old state-run monopoly carrier. As accidents increase, international safety groups have urged passengers to avoid Indian airlines.

RUSSIA Aeroflot broken up, with about 200 airlines taking its place. Governmental chaos makes regulation difficult. Air and ground crews often operate without necessary training or spare parts.

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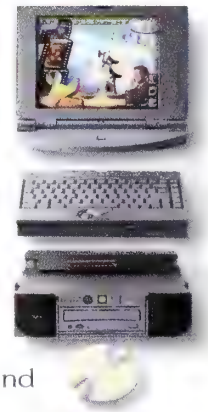

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EDITED BY WILLIAM J. HOLSTEIN

NORTH KOREA: WHY ASIA IS SO CALM AS SABERS RATTLE IN WASHINGTON

If anyone should be fretting over the prospect of nuclear weapons in the hands of North Korea's Kim Il-Sung, it's the citizens of Seoul, just 25 miles from the demilitarized zone. But as war talk flew fast and furious in Washington, it was just another carefree Memorial Day holiday in the city's Myong Dong shopping district. "We Koreans don't think the situation is as dangerous as Clinton believes," said civil servant C. H. Park, 29, over the din of disco and rap music from trendy boutiques. Added a salesman walking arm in arm with his wife: "Why does the U. S. always try to interfere in our affairs?"

The Americans are suffering a sharp perception gap with not only the South Koreans but also the Japanese and Chinese about how to respond to Pyongyang. Under pressure at home to come up with a foreign policy victory, the Clinton Administration has succeeded in getting a reluctant Japan and South Korea to support gradual economic sanctions—at least officially. China, however, is still signaling that it will use its clout in the U. N. Security Council to stall, or perhaps veto, such a measure.

Even if Clinton can push sanctions through, they won't have real teeth. That's because the Asians have nurtured a web of economic, political, and transportation links with the North, and they see those ties as helping to guarantee stability. Moreover, they reckon Kim Il-Sung is too far along with his nuclear program to be dissuaded by sanctions. So Asian strategists are resigned to North Korea's becoming the second nuclear power in East Asia, after China.

STORIES OF HUNGER. All three neighbors regard that as a lesser evil if the alternative is war or the chaos that could result from the collapse of Kim's regime. Despite shrill rhetoric from President Kim Young Sam, the South Koreans don't want a confrontation that might produce massive flows of refugees. And they don't want to pay for a German-style reunification. What's more, the Asians are betting that even if Pyongyang has a few bombs, it won't be able to turn them into warheads on missiles.

In the end, the South Koreans don't believe Pyongyang wants a war. A Gallup poll in mid-May found that 60% of South Koreans think the North has nuclear weapons or will get them soon. But less than 12% believe there is "much danger" the North will provoke a war. They think a much likelier scenario is the gradual collapse of Kim's regime. That impression has been supported by a steady trickle of refugees telling stories of hunger and unrest back home.

Japan is surprisingly relaxed as well. "Not many of my constituents feel a sense of crisis," says Hajime Funada, an influential Diet member from Prime Minister Tsutomu Hata's pan Renewal Party. North Korea is not seen as a big eno threat to warrant a change in Japan's constitutional ban on clear arms. Influential newspapers are urging Hata to slowly on sanctions, and the leading opposition party, Democratic Socialists, opposes them altogether.

Japan also has a sizable, potentially restive population pro-Pyongyang ethnic Koreans. Japan bureaucrats may be able to pressure a banks into tightening up on the flow o estimated $600 million a year these et Koreans send to Pyongyang—but they c stop it. In any event, the Koreans w still be able to carry cash into the North boat and airplane.

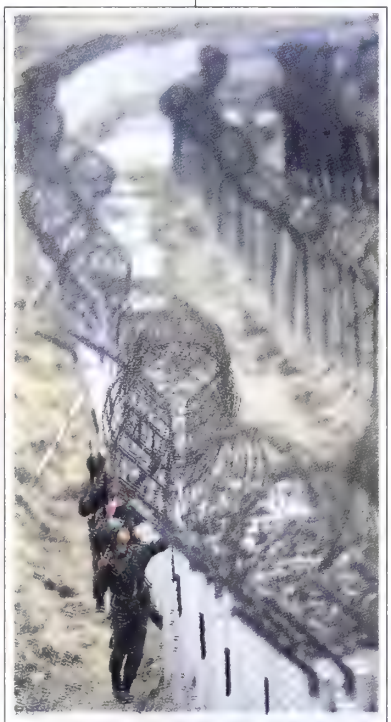
SHARP CONTRAST. China is in the best p tion to influence Pyongyang. But since jing has spent the past year warning W ington not to hit China with economic s tions, it doesn't want them applied again fellow communist regime. In fact, China been quietly expanding economic ties w the North. China now provides a quarte North Korea's oil, and two-way trade taled $900 million in 1993, up 50% f the prior year, according to South Kor sources.

So while some U. S. analysts think C will abstain on U. N. sanctions in excha for Clinton's decision to renew most-favo nation trade status, that's not how it pears in Beijing. The Chinese "don't beli sanctions would be effective" and won't s port them, says a Western diplomat.

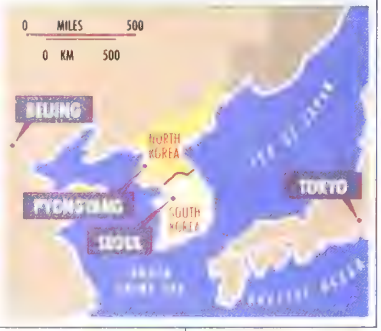
The long-term, Asian-style appro stands in sharp contrast to the desire f quick show of force by some in Washing "You've got to stand for something," say Defense Dept. official. "If you're seri about nonproliferation, you can't let go." Washington hard-liners, such as for U. S. Ambassador to China James R. ley, argue for deploying more milit might, including aircraft carriers.

From the South Korean perspective, r ing the risk of violence is exactly the wr thing to do. With mounting evidence of vere shortages of goods, fuel, and hard rency in the North, Seoul strategists v Kim's bomb as a desperate attempt to push Washington i granting diplomatic recognition and economic aid. "We are nessing the last phase of a totalitarian system," says Suh-Hang, an analyst at Seoul's Institute of Foreign Affair National Security. The Asians believe they can afford to v for that to happen. Their real question is whether the U will provoke a crisis nobody wants.

By Pete Engardio in Seoul, with Robert Neff in Tokyo, M Forney in Beijing, and Amy Borrus in Washington



DMZ PATROL: SOUTH KOREANS DON'T THINK KIM WANTS A WAR



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STRATEGIES

A *CHAEBOL* CHARGES TOWARD THE TOP

A telecom coup may put Korea's Sunkyong into the industrial elite

In August, 1992, Chey Jong-Hyun, chairman of South Korea's Sunkyong group, beat four other conglomerates and won a license to start the nation's second cellular-phone company. Chey, whose products range from petrochemicals to videotape, had spent millions of dollars and worked more than two years with America's GTE Corp. and Britain's Vodafone Group PLC to design a new cellular network that would compete against the government-owned monopoly.

But even before the celebration was over, a political storm erupted. Korea was in the midst of a presidential campaign, and Chey was alleged to have won the license as a political favor from then-President Roh Tae Woo, whose daughter is married to Chey's son. Rather than become a political target, Chey gave up the license, much to the chagrin of his foreign partners. "It was a tough decision, but I had no choice," says Chey. Giant Pohang Iron & Steel Co. walked away with the prize.

Now, Chey's canny reading of Korean politics is paying off. In a bidding contest in January, Sunkyong won a 23% equity interest and management control of the government's Korea Mobile Telecom (KMT) for $534 million. Sunkyong will take over control of the newly privatized company in July with hardly a word of opposition. Even better, it will have a monopoly until the Pohang-led group starts competing in 1996.

The deal is a coup for several reasons. Sunkyong group, with $15.9 billion in total sales in 1993 (table), is Korea's fifth-largest *chaebol*. But despite its size, it has been struggling, eking out a narrow $68.8 million profit in 1993. Excluding sales among the 22 Sunkyong companies, the group lost $8 million, according to an estimate by Ernst & Young. The group's key problem is that petrochemicals and related products, its core business, is a mature industry under bitter competitive pressure.

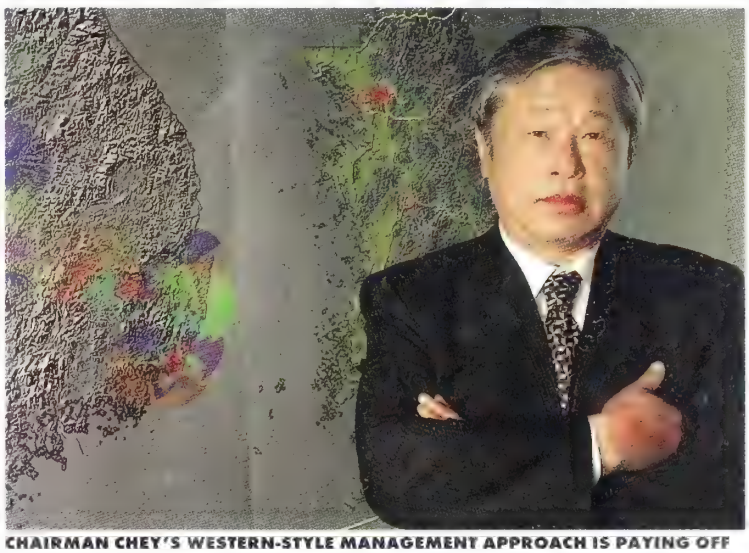
By emerging as the first *chaebol* to get rolling in government-dominated telecommunications services, Sunkyong thrusts itself into a hot technology field. The cellular-phone business is likely to be a big cash-spinner even after KMT's monopoly expires in 1996.

If Chey can pull off the move, Sunkyong could jump into the ranks of Hyundai, Samsung, Lucky-Goldstar, and Daewoo at the top of Korea's industrial power structure. The deal also shines spotlight on Chey personally. As the new chairman of the powerful Federation of Korean Industries, he has emerged as the leading business voice in sensitive dealings between the *chaebol* and President Kim Young Sam. The Hyundai group's Chung family has fallen from ground because of a bitter feud with the government, and Daewoo group founder Kim Woo-Choong also has eased out of the public eye.

ALIEN NOTIONS. But before Chey, 65, can enjoy his new prominence, he must navigate the foray into cellular. To his credit, he's considered one of Korea's most professional tycoons because of his Western-style management concepts such as small-group labor-management relations and professionalism among his executives—notions still alien to many of the family-dominated *chaebol*. But Chey spent five years in the U.S. as a student at the University of Wisconsin and then at the University of Chicago, where he took a master's in economics in 19[illegible].

He used those lessons to save his elder brother's company, Sunkyong Textiles, the foundation for today's Sunkyong group. Soon after he joined the debt-ridden company in 1962, he decided to specialize in one area: synthetic textiles. For years, Chey stuck to the core business of energy, chemicals, and synthetic fabrics even though other *chaebol* were busy diversifying. "I didn't want to be No. 2 in a new business," he says.

In the 1980s, Chey decided to move vertically upstream. He bought many



CHAIRMAN CHEY'S WESTERN-STYLE MANAGEMENT APPROACH IS PAYING OFF

SUNKYONG'S BUSINESS MIX

1993 RESULTS	OIL REFINING	TRADING	CONSTRUCTION	TEXTILES	SHIPPING	TAPES & DISKS	OTHER	TOTAL
SALES* (BILLIONS) ▶	$6.7	$3.8	$0.9	$0.7	$0.7	$0.6	$2.5	$15.9
NET EARNINGS (MILLIONS) ▶	$44.2	$12.4	NA	$9.7	$1.4	$4.7	–$3.6	$68.8

*UNCONSOLIDATED

DATA: SUNKYONG GROUP, ERNST & YO

nt control and 50% of the equity of lf Oil Corp.'s Korean subsidiary, now ed Yukong Ltd., and entered the oil-ining business. Then, he moved down-eam, producing petrochemical resins l derivatives. Yukong, which controls % of the domestic petroleum market, he largest Korean refiner. With $6.7 ion in sales, it accounts for more than % of the group's sales.

Yukong's success is attributed largely Chey's decision to train a cadre of fessional managers. Chey says he w a "fine line" to separate his func-is from those of his managers as far k as in 1975. Rather than making jor decisions on his own, he relies on executive committee. And he almost er intervenes.

The key question is whether that nagement style will work as the up moves into telecommunications, ere it lacks real operating experience. ey has been preparing for this move e 1989, when he took a 20% stake in S. Cellular Corp.'s rural phone ser-e in Tennesse. Later, when Chey was ding for Korea's second cellular-phone pany, his engineers worked with GTE Vodafone to learn more about ana-cellular technology.

ITAL SURPLUS. Chey plans to invest vily in the new business. A number analysts worry that continued thin fit margins in its traditional busi-ses could jeopardize Sunkyong's push telecom. But despite scant profits, group has a capital surplus of about billion, estimates Ernst & Young. ean companies are allowed not declare certain kinds of profits to cre-these big capital surpluses. More-r, Sunkyong plans to raise more ds from the Korean and foreign bond kets.

Chey also argues that the mature en-y and chemical businesses require e new spending. And KMT is certain generate cash. It posted $100 million net profits on $530 million in sales 1993. It is expected to grow at a 15% ual clip, estimates S. H. Chang of ngyong Investment & Securities Co. e startup of the second cellular com-y in 1996 could slow that growth vn. But KMT will continue to be a ninant force with more than 70% of market, Chang reckons.

Chey is already looking for ways to erage his headstart in telecom-nications into broader technological dership. For instance, he wants to KMT to develop niches such as mo-data transfer. No other competitor be able to do that for at least five rs. If Chey's telecom gambit works, re and more Koreans will be dialing kyong's number.

By Laxmi Nakarmi in Seoul

HOW DISNEY SNARED A PRINCELY SUM

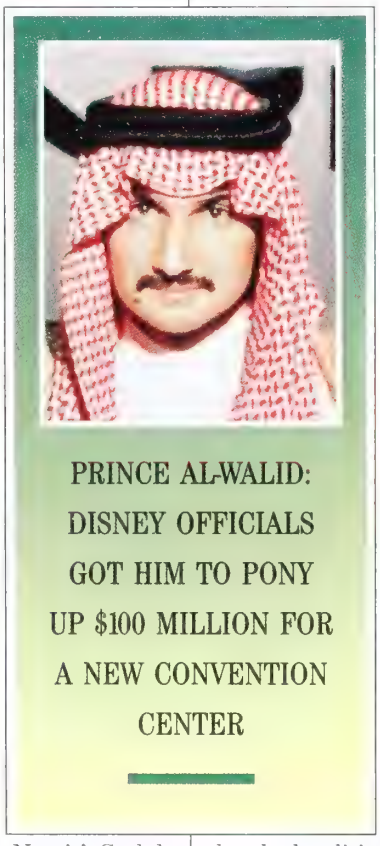
Behind the $400 million bailout of EuroDisney: Carlyle Group

Prince Al-Walid bin Talal bin Abdul-Aziz Al-Saud has a 130-room palace in Riyadh. But he likes to spend weekends camping out with his family deep in the Saudi Arabian desert. Not that the nephew of Saudi ruler King Fahd roughs it. His idea of camping involves high-tech caravans manned by servants and bodyguards. And, of course, there's a satellite uplink just in case Al-Walid wants to make a phone call.

Over the past 11 months, those calls have often gone to Stephen L. Norris, seven time zones away. A founding partner of Carlyle Group, the Washington-based investment boutique, Norris has gotten used to hearing the prince's distant voice at three or four in the morning. "He'd say, 'We're going over this line by line, word by word,'" says Norris. "And he was, too."

RESCUE TIME. The object of Al-Walid's attention was the deal wrought over months of painstaking negotiations among the Saudi prince, entertainment giant Walt Disney Co., Norris' Carlyle Group, and a host of banks. In early June, Al-Walid agreed to inject up to $400 million to rescue EuroDisney—the debt-ridden, Disney-managed theme park near Paris. If completed as planned, the deal will give the 37-year-old prince a EuroDisney stake of up to 24%. And Disney, which owns 49%, would get relief from an investment that has resembled nothing so much as the La Brea Tar Pits.

The EuroDisney deal was hatched last August, when Norris sent feelers to Disney management about his idea of how to recapitalize a park that has lost over $1 billion since opening in 1992. The 44-year-old former tax lawyer had long ties to Disney executives from his days as a vice-president at Marriott Corp., where several of them had also worked.



PRINCE AL-WALID: DISNEY OFFICIALS GOT HIM TO PONY UP $100 MILLION FOR A NEW CONVENTION CENTER

Although Norris also showed his Euro-Disney restructuring plan to Hungarian-born multibillionaire George Soros, "I already had in mind that it was a deal for the prince," he says. The Alabama-born Norris and Al-Walid started working together in 1991, when the Saudi made a move to buy $590 million worth of preferred stock in New York's Citicorp, which at the time was reeling from bad real estate loans.

The prince already had accumulated 4.9% of Citicorp common stock through open-market purchases. But since the preferred deal would make Al-Walid the largest shareholder in America's biggest bank, "he felt he needed a group that had political clout in Washington," says an Al-Walid adviser in Riyadh. With insiders such as ex-Defense Secretary Frank Carlucci and former Secretary of State James A. Baker III on board, Carlyle clearly had clout. It beat out several more experienced players for the job.

Norris knew the Citicorp deal had whetted the prince's interest in bottom-fishing. (Al-Walid's profit on the investment tops $1 billion so far.) He also was aware of the financial clout Al-Walid can

GAMMA LIAISON

muster. Talal, Al-Walid's father, was known as one of the Saudi "Free Princes" in the 1960s, when he was exiled from the country for his liberal views. After being pardoned several years later, Talal built one of the larger fortunes among the fabulously rich Al-Saud clan.

Son Al-Walid likes to be seen as a self-made prince. Various claims about the size of his personal fortune run as high as $4 billion. If he has control of that much money, it's likely that some of it belongs to other Al-Saud family members. But deals ranging from Citicorp to his turnaround of the troubled United Saudi Commercial Bank have burnished his reputation as a real player.

NEAR COLLAPSE. Once Norris got the go-ahead from both sides, he began the grueling process of putting the Euro-Disney deal together. Countless predawn phone calls and several plane trips from California to Saudi Arabia exhausted him to the point that he now says, "I will never, ever do a deal like that again." By May, however, a deal began to take shape. Originally, it looked as if Al-Walid and Carlyle would score big: They not only would buy into EuroDisney cheap (Carlyle offered to pony up $20 million) but they would also get warrants to purchase Walt Disney stock at favorable terms.

In the 11th hour, however, the deal almost collapsed. Sources close to both sides say that up until then, Carlyle had been negotiating with Disney and then discussing the results with the Saudis. But at the last minute, the Saudis decided to negotiate directly with Disney via Al-Walid's top associate, Mustafa Al-Hejelan.

Bad move. "Disney sensed that the prince was falling all over himself to do the deal," says a source involved in the talks. The result: Disney negotiators—who never liked the warrants idea in the first place—told the Saudis they would walk if that part of the proposal wasn't removed. That scared banks central to the restructuring, who threatened to flee as well. As a result, not only did Al-Walid scrap the warrants, but he also agreed to invest $100 million to build a new convention center near EuroDisney. Says another source: "The prince has people working for him who are real lightweights." The prince was unavailable for comment.

Whether the deal turns out to be a Citicorp-like success is hardly a sure thing. Attendance at EuroDisney has been O. K., despite Europe's steep recession But the original economics of the project are out of whack. Penny-pinching guests aren't spending much on food or merchandise. And the recession has killed demand for offices and shopping centers that Disney planned to build on acreage next to the park. Such developments were to draw income to help pay down $3.4 billion in debt. That in turn was to help Disney finance a second park—an MGM Studios film tour site—which would draw visitors to help fill hotel rooms. None of this has happened.

NORRIS: PREDAWN CALLS

Nevertheless, Norris says, the prince sees nothing but opportunity. He's getting his shares at a bargain price (some 70% below the open market value) and he believes the recession's end will bring economic relief. He also thinks the convention center will help fill the half empty hotels. Still, one source close to Disney says that any sort of princely return is five years away at best.

By then, Norris and Al-Walid will likely have done more deals. Norris, according to Riyadh sources, has unparalleled access to Al-Walid. He may guide some royal investment in Italy's IP oil-refining and distribution group. With $3 billion in 1993 sales, Genoa-based IP may be spun off by its state-owned parent, energy giant ENI.

Sounds pretty buddy-buddy. But the Norris-Al-Walid relationship has its limits. Al-Walid, for example, almost never socializes with Westerners, preferring the company of his closest relatives among the 4,000-strong Al-Saud clan. When home from the desert, he relaxes at his Riyadh palace where he plays tennis with his personal trainer, Jaime Rafon, the former tennis coach from the Philippines. Norris has a close business relationship with Al-Walid—but he still calls him "Your Highness." Says Norris: "I never call him Your Royal Highness. We're too formal."

Disney CEO Michael Eisner got a whiff of his new partner's regal ways just as the EuroDisney deal was closing. Anticipating negotiations would be a success, Eisner faxed the prince a message proposing that they meet face-to-face for the first time. That Eisner is Jewish, however, made getting a quick visa to Saudi Arabia problematic, according to aides to the prince. "Plus," says one, "Al-Walid didn't feel he had to hop when Eisner said hop." Al-Walid may be a fairy-tale prince for Disney, but he's still a prince.

By John Rossant in Rome, with Douglas Harbrecht in Washington and Ronald Grover in Los Angeles

EURODISNEY HAS LOST $1 BILLION

THE PRINCE'S TREASURE TROVE

Saudi Prince Al-Walid's major holdings.

Company	Stake	Value
CITICORP	9.7%	$1.7 billion
UNITED SAUDI COMMERCIAL BANK	50%	$200 million
SAKS FIFTH AVENUE	11%	$100 million**
EURODISNEY*	24%	$400 million
PANDA Saudi grocery chain	100%	NA
KINGDOM ESTABLISHMENT Construction company	100%	NA

* Pending investment of up to 24% ** Initial Investment DATA: BUSINESS WEEK, COMPANY REPORTS

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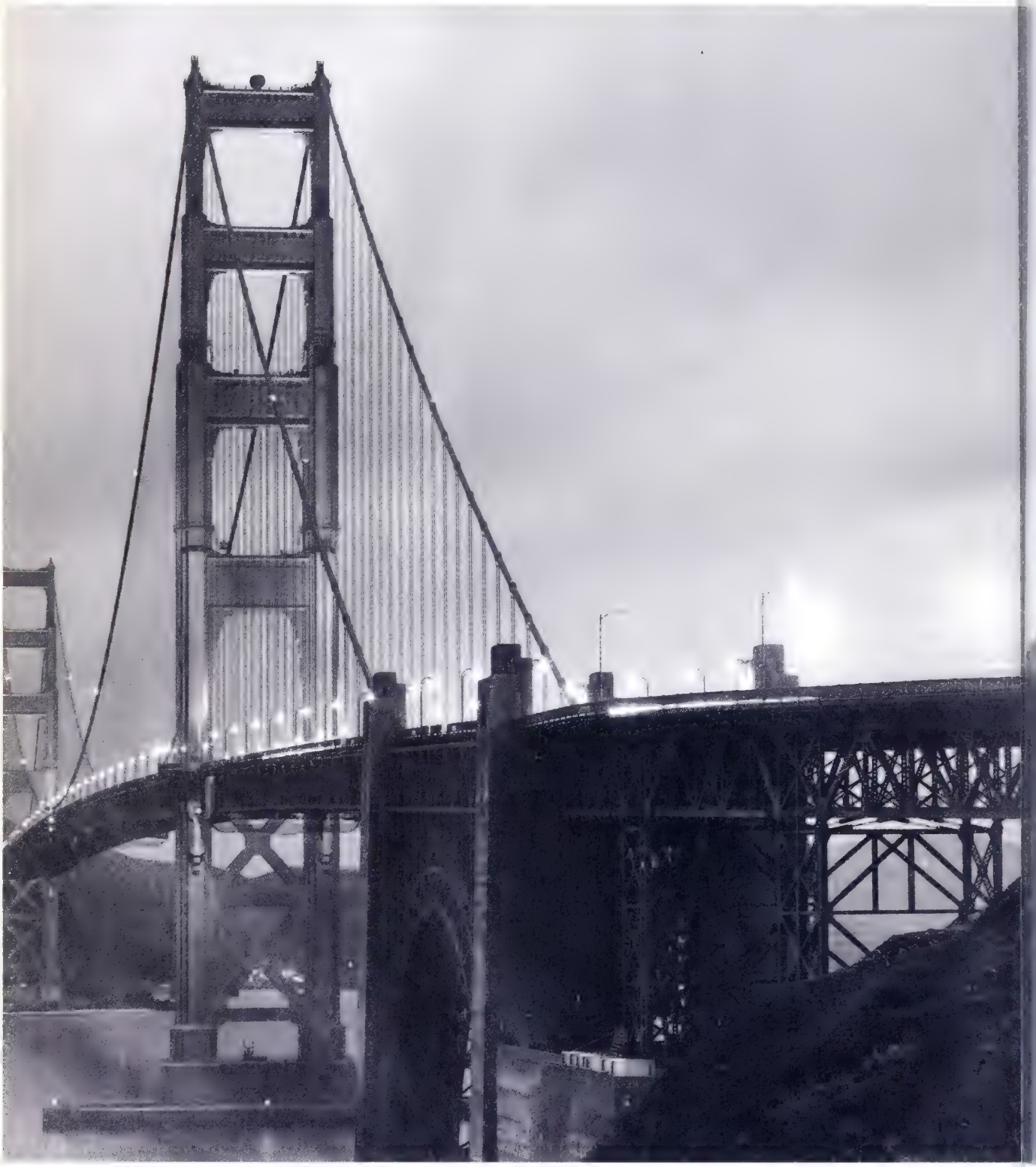

The Golden Gate Bridge photographed by Robert Mizono

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THE HINT OF AN UPDRAFT

For planemakers, the hard times may be easing off

In the Sonora Desert, 30 miles northwest of Tucson, more than 150 used airliners—from DC-9s to 747 jumbo jets—stand parked in rows in a 2,000-acre storage facility. In Everett, Wash., Boeing Co.'s vast assembly plant is scaling back production to two 747s a month, down from five in 1992. Outside Minneapolis, Northwest Airlines Inc. officials have decided not to buy new aircraft: Instead, they'll retrofit their oldest, noisiest planes to meet stringent new antinoise regulations that take effect by the year 2000.

These are hardly good signs for aircraft makers, whose business has been in a tailspin since 1991. Still, many in the industry think they're now seeing early signs of an updraft. Europe's Airbus Industrie expects world passenger jet orders to reach 200 this year, up from fewer than 100 in 1993. Manufacturers already are scrambling to win a few megadeals: $5 billion from China, $6 billion from Saudi Arabia, $6 billion from Singapore. And Boeing, which dominates the market with a 60% share, sees more orders ahead.

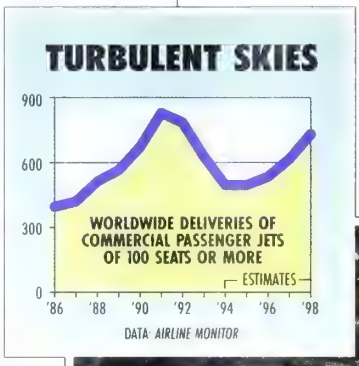
FEELING POOR. It expects peak production of more than 700 commercial aircraft a year in the late 1990s, 40% above current levels. Its reasoning: It thinks the world economy will grow 3.4% annually through the year 2000, and it notes that U.S. and European airlines will have to replace noisy, aging planes with quieter ones. "We see this inevitable need coming down the rails like a freight train," says Boeing Vice-President Richard L. James. Airbus, the No. 2 producer, with 30% of the market, is also bullish: It sees 700 world deliveries in 1998.

To some carriers, suppliers, and analysts, such predictions are mainly blue-sky. Engine-maker Pratt & Whitney, for one, thinks aircraft sales will reach only 11,000 units over the next two decades, below Boeing's estimate of 14,000. That reflects doubt that the financially strapped airlines can afford big new investments. U.S. ...riers—which have lost $12 billion ...ing the past four years—may edge ... the black this year, but many Euro... and Japanese airlines won't. And if ... ing's projections are right, airlines ... need $49 billion of financing a yea... buy all the new planes. "Where in ... good Lord's name are the airlines g... to get that much cash?" asks ana... Nicholas P. Heymann of NatWest ... curities Corp. Indeed, Boeing consi... used aircraft its most worrisome com... itor. "If it's cheaper for airlines to ... ate and maintain an older, ineffic... airplane than to finance a ... one . . . they'll continue to do it," ... Boeing CEO Frank Shrontz.

"RUNNING LIKE CRAZY." His strate... to cut design and manufacturing ... and offer new, efficient planes che... enough to get airlines to buy. Bo... has trimmed cycle time—from star... finish—on its 737 from 18 months to ... than 12, with an ultimate goal ... months. And it is developing new, ... efficient 737s, which it hopes to offe... the same $35 million price of cur... models. "Even though Boeing is the ... ket leader, they're run... like crazy, like they th... they're behind," says P... Aseritis, aerospace analys... CS First Boston. "It's goin... pay off in spades." He se... 38% drop in Boeing's pro... to $765 million, this year—... a sharp rebound, to $1.87 ... lion, by 1997.

Airbus is trying a sim... strategy. "We're setting ... gressive cost and cycle-t... reduction targets," says A... Brown, its director of p... ning—but Airbus may fin... hard to slash expenses: I... government-backed con... tium of French, German, ... ish, and Spanish compan... which tend to divvy up w... pork-barrel style. "The ab... to wring out costs is ... antithesis of what Airbu... all about," says NatWe... Heymann.

Of the big manufactur... McDonnell Douglas Corp. ... be flying into the rough... weather. Its production ... fallen from 50 planes ... quarter in 1991 to 7, it ... more orders canceled t... booked last year, and it is ... able to spend heavily to ... velop new planes. So, un... Boeing and Airbus, Dougl...



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which believes that the industry's cri will be slow—is pushing retrofit I wants to equip aging DC-9s with ev quieter engines, new avionics, and r bished interiors. So far, however, it ha no takers. Its hottest prospect, Air C ada, decided last month to lease 25 e Airbus 319s instead.

The U. S. and European requirem for quieter planes will help spark d mand, but so will changes in the ma Many of the strongest airlines ar Asia, where robust growth, excep Japan, is fueling a boom in air tr Carriers such as Air China and Sin pore Airlines need jumbos to cross Pacific and to fly to Europe. Boeing pects the jumbo jet share of sale rise from 22% now to 30% during next two decades.

POINT-TO-POINT. At the same time, m ufacturers expect higher demand smaller jets. As China and others velop their infrastructure, they'll n these for regional travel. In the U and Europe, meanwhile, the trend focus on heavily traveled short- routes—especially for smaller, more cient airlines. Southwest Airlines the most profitable in the U. S., only 737s, Boeing's smallest narrowb Others are beginning to imitate So west's point-to-point strategy, rely less heavily on congested hub-and-sp systems. As shorter routes gain tra airlines can justify replacing comm turboprop planes with small jets.

None of the Big Three manufac ers—Airbus, Boeing, or Douglas—o offers a plane with fewer than 100 se a niche dominated by British Aerosp PLC and Fokker. But Douglas hope launch a 100-seat version of its MD And Boeing is considering its first 7 100 passenger jet. Boeing will wo closely with manufacturers from Ja who produce major parts of its 767 777, and from China, also a key suppl

Boeing's move is partly defens Japan's producers, such as Mitsubi Heavy Industries Ltd., have been l ing into production of their own si jet, dubbed the YSX. If Boeing team with them instead of competing thinks it can create a new small jet would share parts and pilots with 737. "We want to make sure we h Boeing products in every segmen the market," says Robert L. DeVore rector of product strategy analysis.

Still, the best strategy for boos sales may be to cut costs. That w whenever the market recovers, pla makers will be ready for takeoff.

By Dori Jones Yang in Seattle, Ti Stewart Toy in Paris, James E. Ellio Chicago, and bureau reports

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Food giants are discovering the salsa in the U.S. Hispanic market

For most Americans, *nopalitos* aren't exactly a comfort food. A product of Mexico, they're sliced cactus. But *nopalitos* can set off waves of nostalgia among many Hispanics. As can *tostones* (green fried plantains) from Honduras, and *harina pan*, a corn flour from Venezuela that is used to make *arepas*, a cousin of the English muffin. They're all big sellers for Goya Foods Inc., the Secaucus (N.J.) ethnic-fo distributor. And with the U.S. Hispa population set to pass 26 million a year, other companies are finding i creasingly hard to ignore.

In a sign of the growing clout of Hispanic market, executives at companies as Colgate-Palmolive, Ne PepsiCo, Procter & Gamble, and CPC stepping up the number of prod they're shipping from Latin Amer Marketers say the trend has accele since last year's passage of the N American Free Trade Agreement, w opened their eyes to the connection tween Hispanics in the U.S. and L America. "NAFTA has given peop wake-up call to the opportunities a exist even beyond Mexico," says L Benning, a principal at the Cambr Group consulting firm.

IMMIGRANT BRANDS

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Fabuloso household cleaner

NESTLE Nestum ins cereals—oats, rice, and a wheat, rice, c corn combination—a dehydrated soups, N whole milk powder

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June 20, 1994 *New York*

That's in ample evidence on store elves these days. In April, Nestlé be- n rolling out Nido, a powdered milk it ls in Mexico, and Nestum, its Vene- elan breakfast cereal. In California, octer & Gamble recently began test- rketing Choco Milk, a powdered milk sells in Mexico. Late last year, some l-Mart stores started carrying Maizo- one of the big Mexican cereal brands, the U.S. About the same time, Col- e-Palmolive Co. began marketing its xican household cleaner, Fabuloso, in s Angeles and Miami.

'ORABLE TREND. Most of the products n't big revenue producers yet. But ya's performance—since 1990, sales ve risen from $300 million to $480 lion—has fueled marketers' hopes. o whetting their appetites: the cross- r of such Hispanic specialties as salsa the general market. CPC, which has of the most ambitious growth plans, es to double its Hispanic-product es to $300 million in the t five years. Others are king for more incremental growth. Colgate's goal is "to develop growth markets in otherwise flat business categories," says Stephen Fogarty, executive vice-president for marketing.

Since many U.S. consumer-product companies have cut back on product development, importing brands from Latin America means they can gain entry to new categories without spending much on research and expensive product launches. "They're leveraging the brand familiarity and awareness" Hispanics brought with them when they came to the U.S., notes Les Pugh, a food analyst at Salomon Brothers Inc. Many U.S. companies have acquired Latin brands in international expansions. For example, PepsiCo, which bought controlling interest of Gamesa, one of Mexico's biggest cookie makers, has begun selling Gamesa products to U.S. Hispanics.

Demographics work in the companies' favor. The number of Hispanics in the U.S. grew seven times the rate of the general population between 1980 and 1990. By the year 2000, according to Census Bureau projections, the Hispanic population is expected to grow to 31 million. Half the Hispanics currently living in the U.S. came between 1980 and 1990. The marketing recipe is simple, says Joseph Unanue, Goya's president: "Follow the trend of migrating Hispanics who are coming in and market the products they know from home."

But a Latin birthplace doesn't guarantee success. Goya, for example, flopped when it tried to change *panela*, raw brown sugar sold in block form that Colombians grate for use in desserts and drinks. Goya decided to sell the product already granulated, to make it more convenient. It turned out that people preferred to scrape the sugar themselves, thinking it tasted better that way. It didn't really taste better, a Goya executive says, "it was all psychological." The lesson: Even in *panela*, perception is everything.

By Laura Zinn in New York, with bureau reports

SICO FOOD ERNATIONAL Gamesa kies and pasta

CPC INTERNATIONAL Knorr dried soups & bouillon, Fruquo spicy ketchup/pasta sauce, Lizano liquid seasoners, Maizena corn starch

GOYA FOODS Goya brand maduros (ripe plantains), nopalitos (sliced cactus), tostones (green plantains), arina pan (corn flour), frozen yucca (cassava)

MAIZORO Maizoro corn flakes, sugar frosted flakes, cocoa flakes

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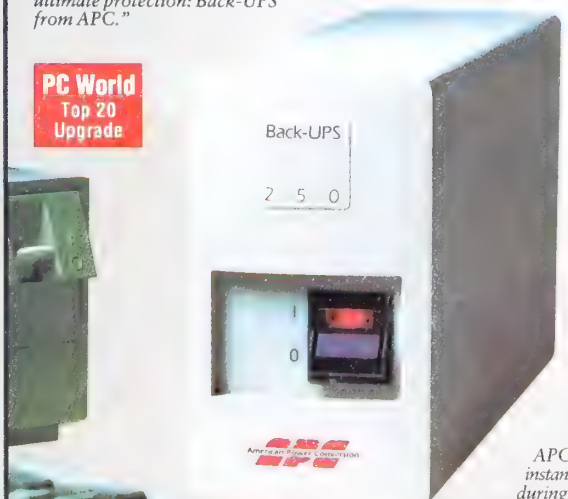

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IT'S REALLY TWO IMMIGRANT ECONOMIES

Refugees and illegals cost the U.S. money—but other immigrants more than pay their way

CAMBODIA TO CALIFORNIA: FOREIGN-BORN HOUSEHOLDS GET 32% OF THE STATE'S CASH AID

REFUGEES ON THE DO

Origin	Percent of househ on welfare,
CAMBODIA*	48.
LAOS*	46.
DOMINICAN REP.	27.
VIETNAM*	25.
SOVIET UNION*	16.
CUBA*	16.
MEXICO	11.
CHINA	10.
HAITI	9.
KOREA	8.
JAMAICA	7.
COLOMBIA	7.
EL SALVADOR	7.
INDIA	3.
TAIWAN	3.
LEGAL REFUGEES	16.
NONREFUGEE IMMIGRANTS	7.
NATIVES	7.

*Major sources of legal refugees
DATA: GEORGE BORJAS, CENSUS BUREAU

Across the country, immigration is the subject of an impassioned and often bitter debate. At issue: Is the influx of more than a million immigrants a year a big plus for the U. S. or a net minus?

Anti-immigration forces argue that immigrants force overburdened state and local governments to pay more for welfare, schools, prisons, and health care. Indeed, California, Florida, and other states are demanding increased federal funding to pay for the cost of immigrants, while Governor Pete Wilson of California is supporting the "Save Our State" initiative, which would deny education and most health care to illegal immigrants. At the same time, advocates say immigrants add far more to the economy in the way of taxes and a productive workforce than they subtract.

But behind the cacophony, a fundamental truth about immigration is emerging from recent economic research. To the degree that there is an immigration problem, it is caused by two groups: immigrants who enter the country illegally and legal refugees who are admitted because they come from ex-communist countries, such as Cambodia, Laos, Vietnam, and the former Soviet Union. These two groups, averaging about 300,000 to 400,000 immigrants a year, tend to have less education and lower wages than the average native-born American. And the refugees, especially, are much more likely to be on welfare than the typical American.

ON THE DOLE. By contrast, the other 700,000 to 800,000 immigrants who come in under the regular immigration system more than pull their own weight in the U. S. economy. These nonrefugee legal immigrants are generally well educated and depend little on welfare. And studies show that unlike the other two groups, they pay far more in taxes than they take in services. That means that efforts to fix the U. S. immigration tem should focus on changing pol toward refugees and illegal immigra

Lumping all three groups toge presents a distorted picture of the pact of immigrants. Take welfare study based on 1990 census data sh that immigrants, taken as a whole, much more than their fair share of fare. While only 8.4% of household the U. S. are foreign-born, they rec 13.1% of public-assistance spend That's according to George Borjas, economist at the University of Califo at San Diego (box, page 76). In Cali nia, foreign-born households receive of all cash assistance.

But look a little closer, and it tu out that most immigrants have noth to do with welfare. The only immigra that are heavy users of welfare are legal refugees. Borjas found that 16 of refugee immigrant households are welfare, compared with only 7.8% of

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refugee immigrants. For immigrants who arrived in the second half of the 1980s, the disparity was even greater. About 31% of recent refugee immigrant households are on welfare, far more than the 5% of nonrefugee immigrants.

The high welfare use by refugees is a legacy of the cold war. Since Fidel Castro took over Cuba in 1959, the refugee category in practice has been used almost entirely for people fleeing communism. Because of the political popularity of anticommunism, refugees have been treated very well. They're immediately eligible for welfare and a range of benefits exceeding even what native-born Americans get.

By contrast, other legal immigrants are not entitled to welfare until they have been in the country at least three to five years. Even after that, accepting public assistance makes it much more difficult to bring relatives into the country. "If you talk about welfare problems of immigration, then we need to look at integration policies for refugees," says Jeffrey Passel of the Urban Institute, who co-authored a recently released report entitled *Immigration and Immigrants: Setting the Record Straight.*

> Refugees are immediately eligible for welfare and benefits exceeding even what native-born Americans get

Another common fear about immigration is that the U. S. is being inundated by a wave of unskilled peasants from Third World countries. Once again, the raw statistics indicate reason for concern. About 41% of recent immigrants haven't completed high school, compared with 23% of native-born workers, according to the 1990 census.

But again, almost all of the "ed tion gap" is due to legal refugees a legal immigrants. In 1990, 75% of re arrivals from Mexico, El Salvador, Guatemala—the main sources of il aliens—did not have a high school d ma. About 46% of the immigrants the main refugee-producing coun also had no high school degree, ac ing to the Urban Institute study. situation is far different, however the great mass of recent immigr who are neither illegal nor refug About 33% have a college degree, pared with only 20% of native work

HOSTILITY. Perhaps the single most tentious topic in the immigration de is whether immigrants contri enough taxes to pay for the serv they receive. The question exploded the public eye in 1993, when Donal Huddle, a labor economist at Rice versity, produced a report conclu that immigrants, including illegals refugees, pay far less in taxes than

ENOUGH ALREADY WITH THE HUDDLED MASSES

It should come as no surprise that the leading immigration economist in the U. S. is an immigrant. As a boy of 12, George J. Borjas came to the U. S. in 1962, part of the first wave of refugees from Castro's Cuba. And he fondly remembers growing up in Hoboken, N. J., in a neighborhood of Italian immigrants.

But unexpectedly, Borjas, an economist at the University of California at San Diego, is also one of the most influential voices calling for a tighter immigration policy. When he first started working on the economics of immigration in 1980, he recalls, "I believed in free trade and open borders." But since then, Borjas has become concerned that the U. S. is allowing in too many immigrants with little education at a time when the economy demands ever-higher levels of skills and training.

BORJAS: REFUGEE PROGRAMS "HAVE REALLY BACKFIRED"

NEW UNDERCLASS. Moreover, Borjas worries that the low-skilled immigrants entering the country now are laying the foundation for a new underclass that could create economic and social problems well into the next century. He examined the Great Migration of the late 1800s and early 1900s and found that skill and wage deficits persisted for several generations. That is, if an immigrant ethnic group had a lower-than-average education when they arrived, their descendants also were likely to be less educated and have lower wage rates. "Ethnic skill differentials disappear very slowly," says Borjas. "It might take four generations, or roughly 100 years."

A refugee himself, Borjas is especially concerned about high welfare usage among the latest wave of refugees. In such groups as Cambodian and Laotian immigran nearly 50% of all househo are on welfare. "We've ma a major mistake," says B jas. "The special efforts help refugees have rea backfired. We introduce p ple to these programs, a then they stay on them."

NO ADVOCACY. Althou Borjas has become convinc that immigration poli needs to be reformed, has resisted becoming t closely associated with an immigration groups. "I ma a conscious decision to st away from the advoca role," says Borjas. "Tha not my job. I do resear for a living."

Still, Borjas is taking increasingly visible public-policy ro He is on California Governor Pe Wilson's economic advisory council, a he has argued that the country nee to do a better job upgrading the qu ity of the immigrants that it gets. Th includes enforcing the laws against il gal immigration, reducing the soci benefits offered to refugees, and ma ing it harder for unskilled immigran to enter the country. Says Borjas: "T more I study immigration, the mo concerned I get."

By Michael J. Mandel in New Yo

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UNITED STATES POSTAL SERVICE

cost in government services. Accord to his latest calculations, the "immigr deficit" nationally is about $42 billio

Huddle's analysis received widespr attention, in part because it was wid disseminated by the sponsor of study, the Carrying Capacity Networ nonprofit group devoted to keep down U. S. population growth. But Hu dle was hammered by a wide range economists. "I was surprised by the gree of hostility," he says.

The most direct response to Hud came from Passel of the Urban In tute. Earlier this year, the think-t demographer published a point-by-p rebuttal of Huddle's analysis, conc ing that immigrants generate a net plus of $27 billion, rather than the billion deficit asserted by Huddle.

What accounts for this enormous ference? The main criticism of Hudd study was that he far understated taxes paid. For example, Huddle sumed that recent immigrants pay Social Security, gasoline taxes, or employment taxes, which together

While economist Huddle sees an "immigrant deficit" of $42 billion, Passel finds a net plus of $27 billion

count for some $28 billion in taxe year. And according to Passel, Hud underestimates the income of legal im grants, which adds some $19 billion the country's tax take.

But even Passel admits the bala sheet for illegals and refugees is nearly so positive. By his calculatio illegal immigrants impose a net cost government of some $2 billion, beca their incomes are low and they are m likely to work in the underground ec omy, where they don't pay taxes. Re gees, too, have low incomes as well high costs for welfare and other so services. Indeed, Passel is now doin study for the Office of Management Budget that will estimate how mu states spend on prisons, education, a Medicaid for illegal immigrants.

There's little doubt that a tough policy toward refugees and illegal migrants could go a long way tow alleviating many of the immigration sues. But today, as in the past, the v majority of immigrants bring skills a energy which help fuel the vitality the U. S. economy.

By Michael J. Mandel in New Yo

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Offered essentially that deal to become an official sponsor of the month-long 1994 World Cup soccer tournament, Philips Electronics, the $30 billion Dutch industrial giant, said *Ja*. But signing on to sponsor this—or any other—high-profile sporting event was no open-and-shut decision for management. Nine times out of 10, when asked to sponsor a prestige-laden sports contest, even the Olympic Games, Philips says no. "Sponsoring should start with your marketing problem or opportunity and not with a proposal that lands on your desk," says Peter Verest, Philips' coordinator of sports sponsorships. "That's our prime rule."

It isn't the only one. Philips has a Ten Commandments of sports sponsorship, acquired from the experience it got moving from the amateur ranks of sponsoring national sports events in the 1950s to the big league of global sponsors at World Cup 1986 in Mexico.

With this summer's tourney set to kick off on June 17 in Chicago, the buzz in the sports-marketing world is that some of the World Cup sponsors are not happy campers: Witness the battle between Sprint Corp. and MasterCard International Inc. over the use of the Cup logo, and the instances of "ambush" marketing (BW—May 2). Yet Philips—the sole European company in the lot—so far is pleased with its role and its payoff prospects, largely because the company is following rules it set for itself.

For Philips, the first Cup contest ever held in the U. S. fits an actual marketing need: to beef up its corporate brand name in a growing U. S. market, where its other brands, including Magnavox and Norelco, are better known. One way to do that is to pay some of the $20 million in kind: Soldier Field, where Germany will face Bolivia on opening day, needed upgraded stadium lights. Philips Lighting Co. got the job and is using the stadium as a kind of mega-showroom for its ArenaVision system, necessary for high-definition-TV cameras. Likewise, whenever one of the nine stadium operators needs a TV camera, phone handset, giant video display, security system, or even a coffee maker, the appropriate Philips division will have a crack at providing it. "If we have a choice, we always choose to pay in product," says Verest. "Sponsorship, after all, is a marketing tool."

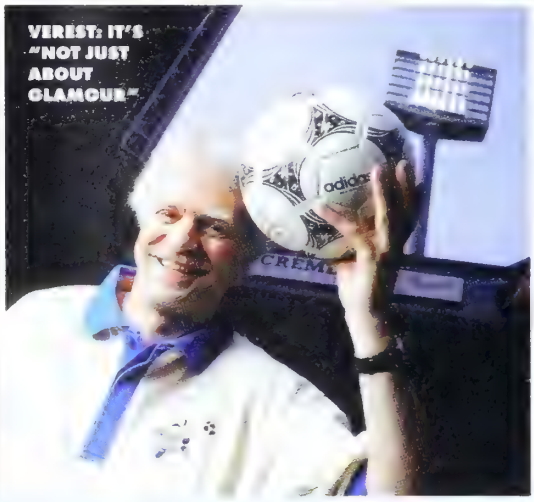
Philips will also get to highlight products such as its slow-selling Compact Disk-Interactive players: They will be in evidence at or near stadium signs loaded with World Cup stats, trivia, and past highlights. And Philips' 75%-owned music-and-film affiliate, PolyGram, has a separate deal for rights to the official World Cup song, *Gloryland*, as well as videos of Cup highlights.

DYNAMIC IMAGE. Association with the Cup, Philips hopes, will also contribute to a more dynamic, youthful, and cutting-edge corporate image. But the real goal Philips hopes to score is increased sales. In-stadium advertising rights and signboards on the field perimeter should provide a key assist there. "Viewers should see those boards about 7½ minutes per [two-hour] broadcast," says Gary Pluchino, vice-president of Lucerne-based ISL Marketing, which negotiated the sponsorship deal.

Philips' experience sponsoring the 1988 and 1992 Olympic Games was less than a smash hit. For one thing, Olympic rules ban the use of perimeter signboards entirely. And after spending four years of sales numbers, Philips exercised its right of first refusal by declining to sponsor the 1994 Winter Games, which Matsushita Electric Industrial Co.'s Panasonic Co. then grabbed.

Despite the excitement over the world championship, Verest warns that "sponsorship is not just about glamour." Philips hasn't had any major glitches with the World Cup so far. But snafus such as the week-late arrival of VIP tickets for the 1990 World Cup in Italy can give a global giant serious flutters. Some risk, in fact, is always inherent in sponsorship. "When we sign up," Verest notes, "we don't even know who the [Cup] teams will be." So such a risk may be worth taking, though. "In the end," says Verest, "we know we'll be on TV in 180 countries." That's a headstart play in anyone's book.

By Patrick Oster in Eindhoven, the Netherlands



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3. There shall be a mass audience
4. There shall be direct exposure
5. The project shall not be risky
6. Results shall not depend on an athlete or team
7. There shall be a major role for the company
8. There shall be no legal, environmental, or other hazards
9. The event shall be well organized
10. There shall be continuity with past sponsorships

DATA: PHILIPS ELECTRONICS

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nyone who's ever sweated to start a business from scratch knows the old saying, "it's not the size of the dog in ight, it's the size of the fight in the dog," ies to the competition between companies et the job and do it right. Once larger panies could count on the sheer muscle of nological tools to hold some edge over ler companies. Today advances in every- from telecommunications to image pro- ing equipment is helping even the odds veen the corporate Goliaths of the world smaller, but just as tough Davids.

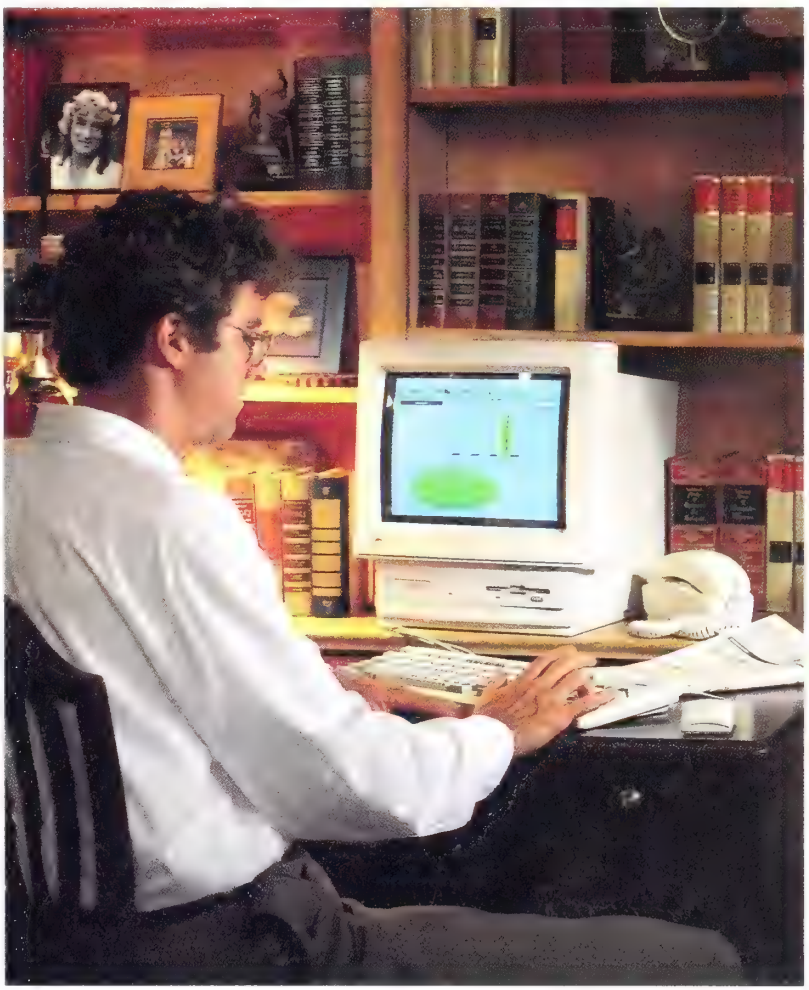
ny small business, even one that's run from den down the hall, can go toe to toe with r competition and e out ahead. As as the talent is in e, it's possible to bigger, sound er – and perform er – with the right pment and exper- of course.

ome of the areas re advances in oprocessors, image essing, integration printing technolo- and cost efficiencies e come into play ude color copying printing, multime- and telecommuni- ons. Those gains e resulted in afford- personal comput- that enable one to everything from nage an audio/ o presentation to wering and routing when everyone else is working to meet a deadline.

Technological advances continue to redefine the capabilities of equipment designed for small businesses [and] it's easy to get caught up in a numbers game.

Improvements in printer technology are bringing higher quality output within the reach of even home-based businesses. Last month Microsoft announced plans to support the Hewlett-Packard line of LaserJet 4M and LaserJet 4 Plus laser printers with software upgrades for Windows 3.1, Windows for Workgroups and Windows NT. Both printers deliver 600 dpi, double the industry standard of only a couple of years ago. The Microsoft software enhancements will allow users to print out higher resolution documents created with Windows applications.

Because technological advances continue to redefine the capabilities of equipment designed for small businesses, seemingly month by month, it's easy to get caught up in a numbers game of bits and bytes, baud rates and the like. But it should be comforting to know that, more and more, the equipment that helps a business function has been designed to solve a problem – rather than demonstrate the raw capabilities of someone's R&D lab. And that's the way anyone looking to upgrade his or her business should consider new equipment.



Compaq's Presario 425

Office in a Box

The technological centerpiece of any office remains a personal computer. Finding a computer that is fast and powerful enough to do everything from crunch numbers in a flash to outputting

flashy documents is probably the easiest part of buying one. Deciding on just the right configuration, software, and peripherals to get the job done right, though, is the harder part of the equation. The good news, though, is that more and more computer manufacturers are making the task easier by selling PCs that have been configured with small business needs in mind: the right software, peripherals, and memory so that the PC can make a business more productive the minute everything has been plugged in and the power turned on.

"We tried to incorporate software that would make it usable out of the box in a small office, home office environment," Michael Norris, vice president of Compaq Computer's Consumer Product Group, says of his company's Presario personal computer line. "We want the user to be able to emulate the appearance of a larger corporation without having to staff up."

Compaq's 600 and 800 series CDS (multimedia) Presario PCs, for example, come packaged with Microsoft Works (a combination word processor, spread sheet and database program) a CD-ROM drive, COMPEL (a multimedia presentation package including sound, graphics, and video) clip art for desktop publishing, an 11 million phone number business directory on CD-ROM, the ability to access photography and other images stored using Kodak's Photo CD format, and Microsoft Publisher, an entry level desktop publishing package. Compaq Presario CDS 800 series PCs range in price from $1,899 to $2,299 depending on microprocessor and hard drive capacity.

Compaq's CDS 800 series, in fact, typifies the direction PC manufacturers are taking with their products. Most personal computer industry experts say that within a year or two it will be hard to find anything but an entry level machine without a CD-ROM drive.

"We think the user ought to be self-sufficient with the product, rather than having to go out after they've bought it and then first try to figure out what they need to buy to make it work for them," says Norris. The software [and] peripherals package was assembled based on the responses from focus groups and on observing what small business owners were buying with their PCs," Norris adds.

Because the telephone is often the first – and most important – contact between a business and potential customers, products that make a small business sound as if it's much larger than it is are becoming increasingly prevalent.

That strategy was also behind Compaq's decision to include a voice mail system in th[e] 600 series, as well as the 400 series, which [are] aimed at more general home use. Incoming messages are stored on the computer's hard disk drive – it takes about one megabyte of st[or]age capacity for a one-minute message. The system can be configured for up to 999 separate voice mail boxes, with messages for each mail box displayed on screen by date and time.

Prometheus Products, which developed the voice mail system, also sells stand-alone versions of it for both Macintosh and Windows computers for between $200 and $350 suggested retail.

Because the telephone is often the first – and most important – contact between a business and potential customers, products that make a small business sound as if it's much larger than it is are becoming increasingly prevalent. Voice mail may be the bane of the business landscape of the 1990s – large companies, in particular, can swallow an incoming call into a seemingly impenetrable morass of electronic switching. But there's nothing worse that an unanswered or misrouted call in the first place.

And there's no denying that voice mail can a business a more professional appearance. An increasing number of local telephone panies have begun offering one or more ns of voice mail to their residential as well usiness customers. Calls are stored at the phone company's central office, and can be eved from remote locations. Users can gnate several voice mail boxes, so incoming can be routed to particular people, or for icular projects. Although the cost varies n market to market, voice mail for a small ness costs about $6 a month.

or people who want a self-contained sys- , there are several voice mail products – in nce, digital answering machines that have wn up – that are sold by various telecom- nications equipment companies. Some will dle incoming data as well as voice messages, just about all offer more functions and abilities than a standard answering machine. ost all were designed to meet the needs of ll offices – and home offices in particular.

When Bogen Communications set out to develop its first voice mail product, the company turned to a home office marketing consultant.

When Bogen Communications set out to develop its first voice mail product, for example, the company turned to a home office marketing consultant and quickly arrived at a set of needs that should be built into the company's FRIDAY "Personal/Office Receptionist."

"We had to come up with a device with a small footprint and the ability to combine multiple devices and functions," says Ron Sacher, Bogen Communications vice president of business development.

The latest version of the all-digital device incorporates eight voice mailboxes, including

Bogen Communications' FRIDAY, the personal/ office receptionist

HOWTIME FROM YOUR PC

ntil the last year or two, multimedia roducts – combining text, graphics, ound and, occasionally, full-motion deo – were typified by expensive evices aimed primarily at large com- anies. But the evolution of personal omputers into multimedia machines as begun to change all that.

As anyone who's spent more than a w minutes on any respectable comput- r still can attest, multimedia upgrade ts for PCs have become widely – nd relatively inexpensively – available. lost kits include at least a CD-ROM rive and a sound card that will allow sers to run audio/video presentations irectly from their computer.

A CD-ROM looks like a standard ompact disc, but instead of storing ust music, it can hold text, images – video, in some cases as well as sound. Software publishers are producing everything from games to encyclopedias, phone books and advertising presentations on CD-ROMs.

One such package, Crystal Flying Fonts Pro, from Santa Clara, Calif.-based CrystalGraphics, allows an ad agency or marketing department to create animated 3D logos and titles and output the results frame-by-frame to a videotape recorder or a hard disk drive. The $495 package includes a CD-ROM containing background pictures, texture maps and other material.

Where CD-ROM drives typically cost $1,000 or more just a couple of years ago, a growing number of manufacturers offer drives that sell for under $300.

Most kits include "double-speed" CD-ROM drives which, as the term implies, can access data twice as fast as first-generation CD-ROM drives. A few manufacturers have introduced triple-speed and quadruple-speed drives, but for most applications incorporating video on screen a double-speed drive will do nicely.

That's because the average PC can process only so much video data at a time. Where triple- and quadruple-speed drives shine is, for example, accessing information from databases such as massive telephone directories stored on CD-ROMs.

Prices for multimedia upgrade kits vary, depending on the manufacturer, exact package and the store, but most buyers should be able to find packages for between roughly $400 and $600.

one that routes fax or PC data transmissions to a communications port and three for outgoing voice announcements. It also forwards calls by placing an incoming call on hold while it dials and connects the call to another number. The single-line version of FRIDAY has a $399 suggested retail price, while a two-line version lists for $499.

An updated version, due in stores this fall, will add "fax on demand," where callers will be able to retrieve any of 13 different documents on their fax machine. "You're seeing fax on demand emerging as an advertising tool, and we expect it to be big in other areas."

Particularly for home-based businesses, enhancements in a broad range of other telecommunications products are providing more communications punch for the dollar. New multi-line telephones – often with built-in speakerphones, expanded autodial functions and other features – are making it easier for the small office to function efficiently when there's no money in the budget for a receptionist. Among the better known suppliers in this area are AT&T, GE, and Panasonic.

New multi-line telephones are making it easier for the small office to function efficiently when there's no money in the budget for a receptionist.

All-in-One, And One-for-All

Because time, money, and space are always large concerns for small businesses, equipment manufacturers have been concentrating on building multiple functions into single devices. While no one has yet devised one box that will perform every electronic task, some companies are getting close.

In addition to communications products like FRIDAY and others that combine voice and data functions, another area where product integration makes the most sense is imaging. Copiers, fax machines, and computer printers all address essentially the same task – creating hard copy, either from data or an original document. So why not create a single device that can do all three?

Sharp's CY-300 cordless phone

Two such products, Okidata's DOC IT lin of document processors, and OMNIFAX's G function as plain paper fax machine, copier, PC printer, and scanner.

"Users can simultaneously scan one document, print a second and send or receive a third," says OMNIFAX Vice President, Jerry Hutton of the G5. The $1,995 list machine is windows-compatible and allows users to fax documents directly from their PC.

The two DOC IT products from Okidata, the models 4000 and 3000, list for $2,999 an $2,499 respectively. The DOC IT 3000 deliv ers 300 dpi output, while the higher resolutio DOC IT 4000 has 400 dpi output.

As an upgrade to its TF551 fax machine, Toshiba America Information Systems introduced in April a software package, ImageVisio 2.0 that allows the fax machine to function as computer printer and scanner. The $299 soft ware package, according to Toshiba, will work with any PC running Windows 3.1 or 3.0 and allows users to print or fax documents directl from their PC. Users can scan documents that will fit in the fax machine's paper feeder.

The increasing affordability of plain paper fa machines – it's possible to find reliable model in stores for less than $1,000 – is one of the driving forces behind the development of all-i one devices. In most cases, manufacturers hav taken a plain paper fax machine and added th necessary software and communication ports to connect the fax machine to a computer for document printin and scanning.

Canon's Faxphone B160, for example, is a bubble jet plain paper fax machine with a parall port for connection to a Windows-compatible PC. The B160, with the necessary printe driver software, lists for $1,565

Within the thermal fax machine market, combination fax telephone answering machines are becoming increasingly more

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Whether it's a sales brochure, a report for a client, or flyer that will be slipped under a few thousand doorways, at the end of the day that sophisticated document created with the help of a few thousand dollars worth of electronics is going to end up as hard copy. And how it looks will determine to a large extent how you look to clients, real and potential.

That's why advances in copiers and computer printers are so important, and why choosing the right one can pay dividends to the bottom line many times over.

The more important advances in printer technology include the development of near-typeset-quality laser printers at affordable prices, and the introduction of color printers that sell below $1,000. Similarly, the marked reduction in pricing on some color copiers is also bringing them within reach of small businesses and some home offices.

The growth of affordable color printers is reflected in an explosion in color printer sales. By 1995, according to the market research firm of BIS Strategic Decisions, sales of color printers in the U.S. will reach 2.4 million units – up from only 360,000 in 1992.

While laser printers dominate the high-resolution segment of the personal computer printer market, color printing – at least at affordable levels – is dominated by ink-jet technology in one form or another. All work in essentially the same way by combining jets of cyan, magenta and yellow on a page to create full color images.

One example of the new generation of more affordable color printers is Canon's BJC-600 bubble jet printer, with a selling price below $650. The plain paper color printer is said to deliver 360 dpi resolution for standard-sized documents.

For smaller jobs requiring greater resolution, Sony Electronics' Business and Professional Products Group designed a digital color computer printer capable of delivering what the company terms "photo-realistic" hard copy. The 4-inch by 5.5-inch output from Sony's UP-D1500C has a maximum resolution of 664 by 512 pixels – with a palette of more than 16 million colors, enough for near-typeset-quality images. The unit has a suggested retail price under $2,000.

The most important advance in monochrome printing has to be the introduction of 600-dpi laser printers from a variety of manufacturers at prices common to 300 dpi laser printers only a few years ago.

Sharp Electronics' JX-9460PS laser printer, for example, is PostScript-compatible, delivers up to 600 dpi output, and comes with 62 fonts built in for a suggested retail price of $1,199.

Some of the most dramatic decline in hardware pricing over the last few years, though, has come in color copiers. By applying the same bubble jet technology it developed for computer printers to copiers, Canon over the last two years had brought the entry point for color copiers down from the $20,000-plus range to below $5,000.

"Color copiers were for large (advertising) agencies, graphics companies, and copy shops," notes Jun Iwasaki, Canon Graphics Systems division general manager. "Over the last two years color copiers have begun moving into the small business environment."

Iwasaki says more than half the companies that are buying Canon's CJ-10 and CJ-7 color copiers – priced at $5,995 and $4,495 respectively – have fewer than 19 employees. Both models can be used to produce color transparencies and can print on card stock as well as regular paper stock.

In addition, the CJ-10 can be connected to Windows-, Macintosh- or Unix-compatible computers to serve as a computer printer and scanner, something more than 80 percent of purchasers do, says Iwasaki.

Above: Sharp's Z-20 compact copier

Left: Canon's color bubble jet BJC-600

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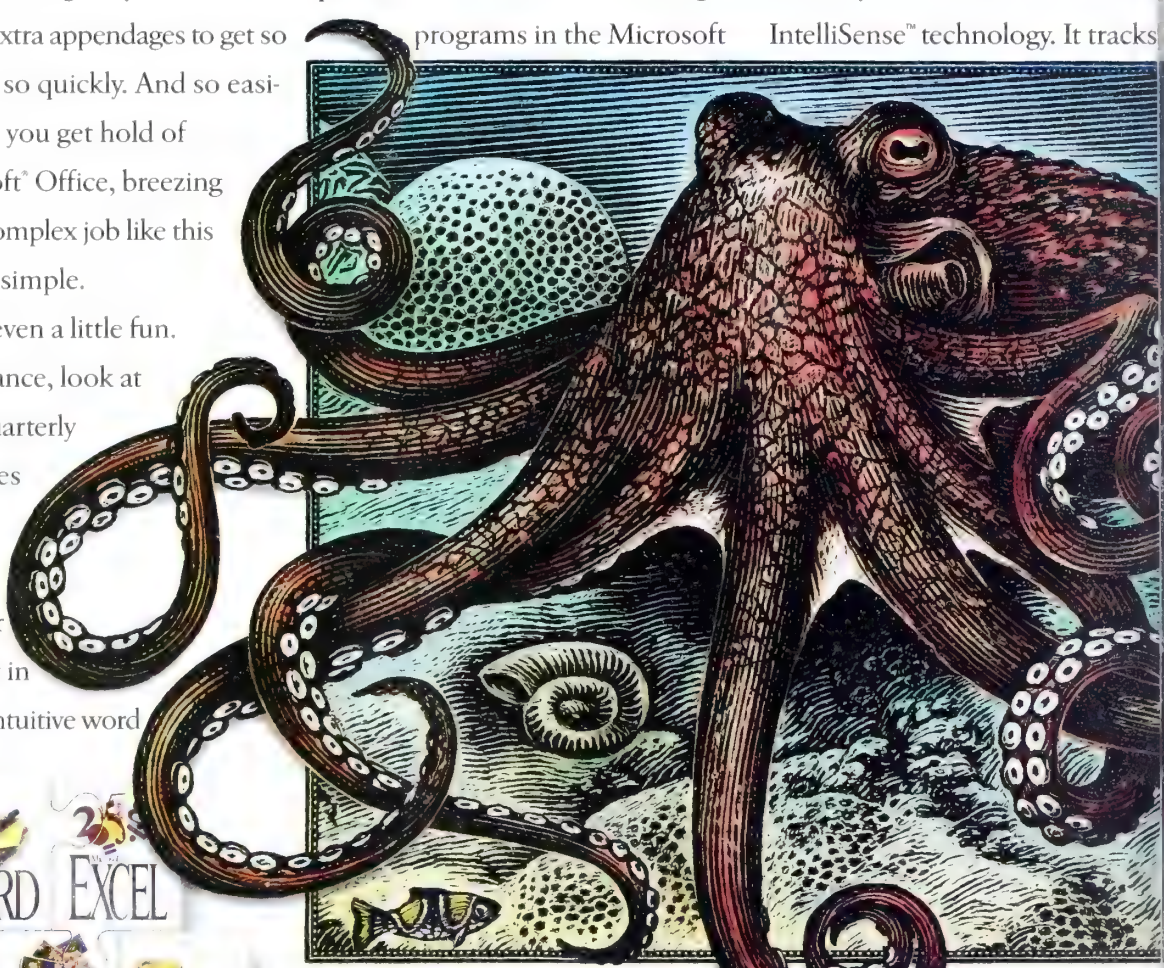

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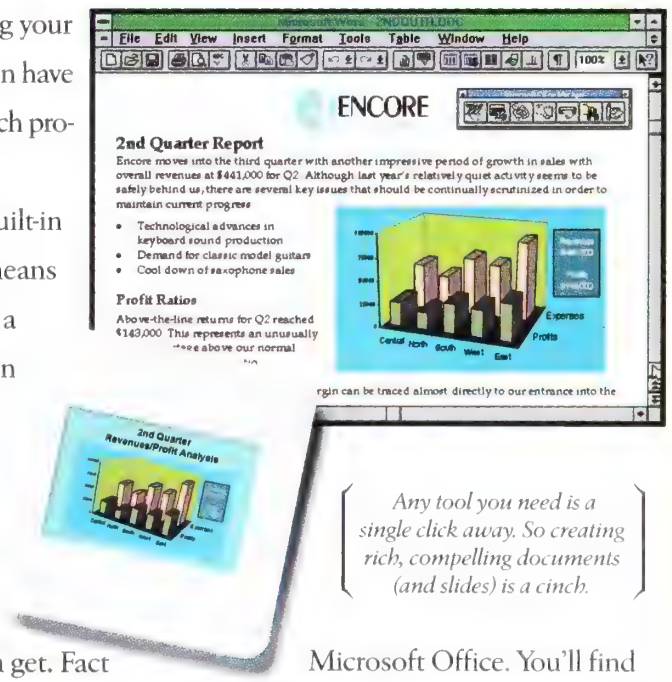

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common and affordable. And in a further enhancement of that concept, the Panasonic earlier this year introduced the first fax/telephone answering machines with a cordless telephone.

The company's KX-F390, suggested retail price, $1,299.95, is a thermal fax machine with a cordless phone that operates in the 900 MHz range for greater reliability. The telephone also operates as a remote control for fax machine functions.

The increasing use of the 900 MHz range by cordless telephone manufacturers, in fact, is bringing the first broad range of relatively interference-free cordless phones to the mass market. Older cordless phones used the 46-49 MHz bandwidth and were prone to interference from everything from fluorescent lights to electrical motors. A number of manufacturers, including Panasonic, Uniden, AT&T, and Cincinatti Microwave, have begun selling 900 MHz cordless phones, for prices ranging from about $200 to $300.

You Can Take It With You

When an executive with a large corporation goes on the road to meet with clients, trouble shoot a problem at a distant subsidiary, or just attend a conference across the country, chances are work back at the home office continues to hum along nicely without his or her participation.

But when there are only a handful of people back at the ranch – or perhaps no one when the boss is also the only employee – road trips can become harrowing experiences.

Luckily, advances in portable electronics have made it easier – and more affordable – to create a reasonable facsimile of a working office in a hotel room, and without straining the back muscles too badly on the way. The trick is to figure out what you need to do, and what it will take to get the job done.

The heart and soul of any portable office is a portable personal computer. This is one of those areas where buyers are enjoying the best of all possible worlds: smaller, lighter, and more powerful PCs at steadily decreasing prices.

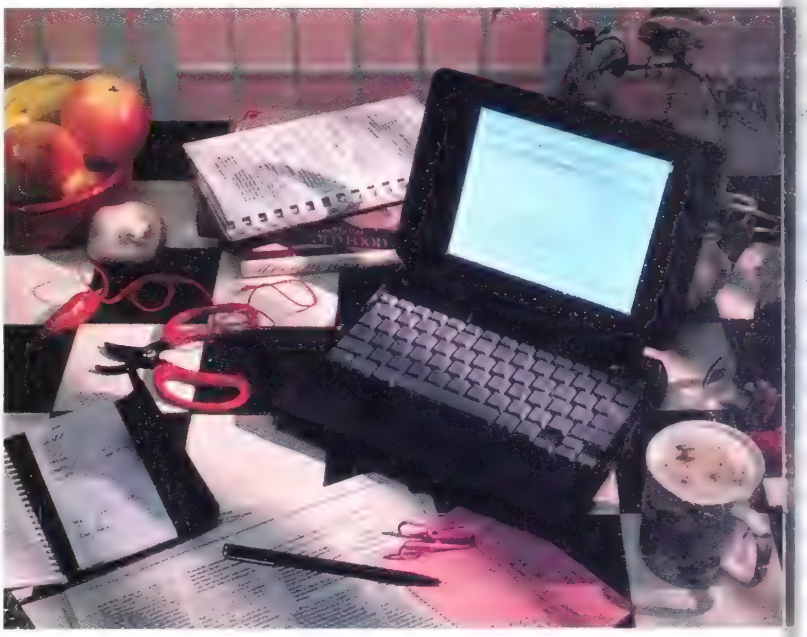
Most hard working executives are at their job long after most [hotel] business centers close for the evening. The only alternative is to bring the office along for the ride, or at least as much as you can carry with you.

The incredible shrinking nature of portable computers can be seen by the evolution in designations: from "laptop" computers that rarely weighed less than 10 pounds, to notebook computers that weighed in at six to seven pounds, to subnotebooks that, at less than five pounds with battery, are small enough and light enough to carry around all day in a briefcase without scheduling an extra long session with the chiropractor.

Exemplifying the new breed of portable computers is Compaq's 3.5-pound Contura Aero, a 486-powered subnotebook line that ranges up to a 486/33 color LCD version with a 250 megabyte hard drive. That's more computer than most desktop users could call upon just a couple of years ago.

Monochrome versions of the Contura Aero start at $1,399, while Aeros with color LCD screens begin at $2,199.

A large part of the reduction in weight on the Aero was achieved by eliminating the floppy disk drive. Although that might be a problem for computer users who plan to share floppy disks, Compaq Consumer Products Vice President Michael Norris says that "the majority" of people who use a portable



Compaq's Contura Aero

DATA COMMUNICATIONS FOR THE MASSES

Data communications traditionally has been limited by the fact that communications networks and hardware rarely speak the same language. Most will exchange data based on the lowest common denominator of unformatted text. But it's generally difficult if not impossible to send formatted documents, or to transact business from one network to another.

That technological tower of Babel may be about to fall, though, if a data communications venture announced last Winter can build widespread support for its communications software.

General Magic, says the company's President and Chief Executive Officer, Marc Porat, has developed what amounts to a data communications protocol, dubbed "Telescript," and a graphics-based user interface, "Magic Cap," that the company hopes will be incorporated into personal communications products and networks. Telescript and Magic Cap will allow personal communications devices from different manufacturers to exchange formatted information and to retrieve and exchange information over both wired and wireless networks.

The first network is expected to go on line this summer, when AT&T's PersonalLink service is expected to begin operating. In essence, PersonaLink will provide a platform for third-party service developers, much the same model that CompuServe has applied to its on-line information service. AT&T expects to have between six and 12 applications up and running by the time the service starts, according to the current schedule.

The key to all of the applications, according to General Magic, will be the so-called "smart messaging" that will add intelligence to everything from fax and e-mail messages delivered through PersonaLink, to transactional services, such as home shopping and banking. As described by General Magic executives, messages sent back and forth using Telescript will be carried by intelligent electronic "agents" that will be able to do everything from routing a message based on its importance and the relationship between the sender and the receiver, to negotiating the best deals on electronic shopping services.

General Magic executives say they can eventually expand Telescript capabilities to add voice and handwriting recognition to Telescrip t-equipped products. Porat estimates that 25 third-party information providers are working on applications that will run either on the AT&T network, independently on Telescript-equipped hardware or both.

Magic Cap is an object-oriented user interface designed to make wireless data communications easy for even novice users. Even some of the more popular on-line data networks in the United States have failed to attract wide audiences, in part because of the difficulty of maneuvering within the network. Porat and other General Magic supporters suggest that the Magic Cap user interface will help build a mass market for data communications.

Most of the companies that have either developed personal communications products that incorporate General Magic's technology are also investors in the company: Apple, AT&T, Matsushita, Motorola, Philips, and Sony. Of that group, Sony, AT&T, and Motorola have already unveiled personal communications devices that incorporate Telescript and Magic Cap, and others are expected to follow.

mputer use a hard drive for data storage. Most people who need to send files from e PC to another are doing it electronically, modem or fax, he notes. "In general, the hole country is moving more to telecommuations to begin with."

Just about all notebook and subnotebook mputers can be purchased with a fax/odem, either built-in or as an external tion, that can be used to transmit files and ectronic mail. Compaq, for example, sells a reless fax modem, suggested retail price out $550, that can be used with a cellular phone to send data from a car moving at 50 miles an hour – or a beachside resort as the sun is setting. Wireless modems that connect most portable PCs to cellular phones are available from a variety of manufacturers.

Even someone sitting on a beach may need to produce hard copy from time to time.

By some estimates, in fact, data transmissions will account for up to $400 million in cellular phone use by next year. While that pales next to the $10 billion-plus in voice communication over cellular phones, it's a good indication that more than a few people who work while on the road are taking their office with them – even when there's not a phone line in sight.

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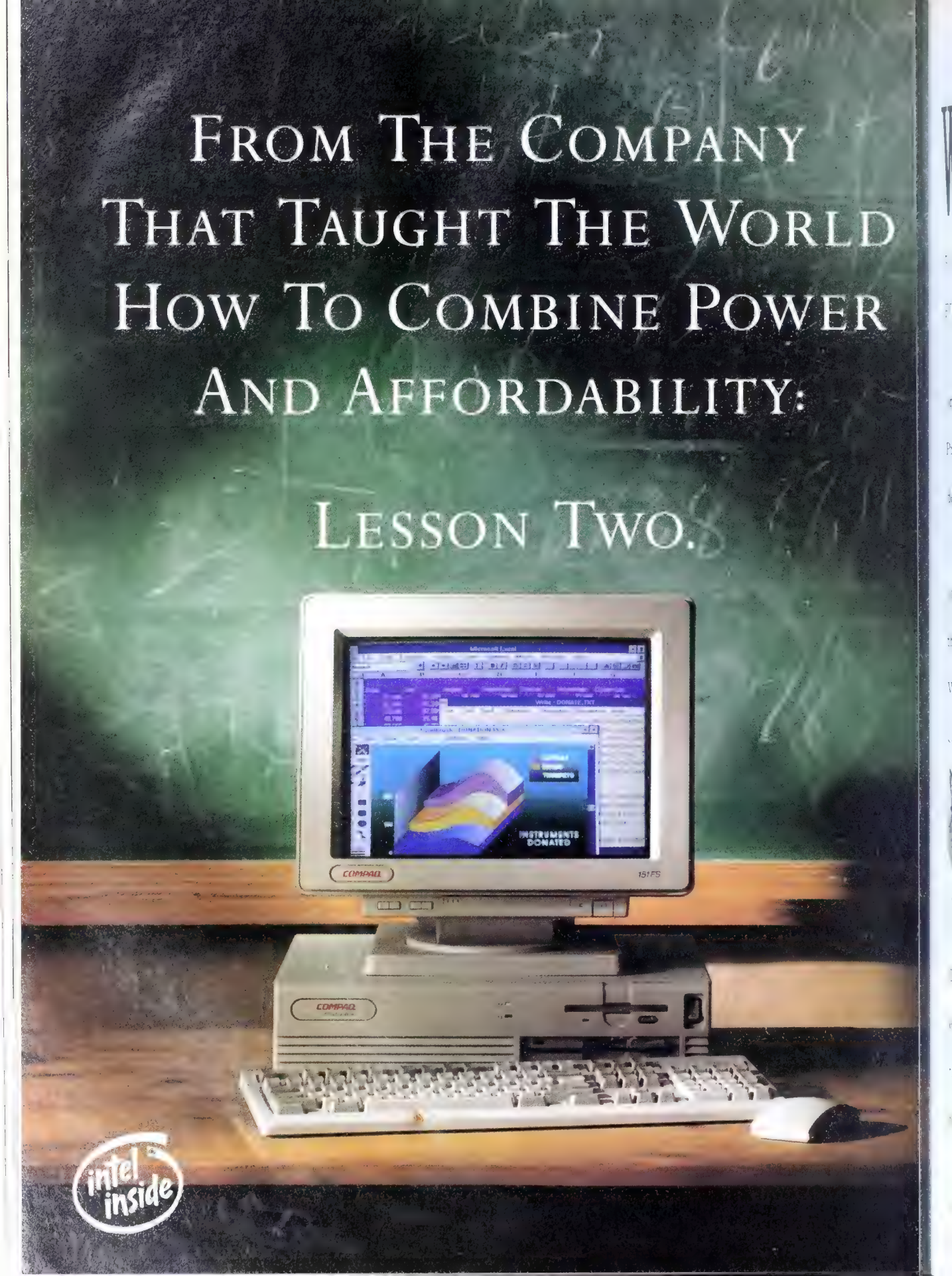

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Even someone sitting on a beach may need to produce hard copy from time to time, though. And here as well there are more than a few alternatives.

One of the more intriguing packages is a laptop PC from Canon with a built-in bubble jet printer. The NoteJet 486 is a 486-powered notebook with a 360 dpi resolution bubble jet printer, and two PCMCIA slots that can be used to connect memory cards, miniature hard drives, or a fax/modem in a 7.7 pound package. The NoteJet 486 line ranges in suggested retail price from $2,499 to $2,999, depending on configuration.

For those who already own a notebook, several manufacturers offer portable printers. Sharp Electronics' JX-30, for example, is a thermal transfer printer with 360 dpi resolution in a slightly less than one-foot-long package that weighs just under two pounds. The printer runs off a standard rechargeable camcorder battery that can handle a 40-page output at a time between charges.

Beyond the workhorse portable computers and related devices are any number of niche products that can make work on the road a bit easier to handle. As anyone who's ever attended a trade show or conference knows, one of the tedious chores that follows any of those events is taking the stack of business cards you've collected and finding some way to organize them. One solution, from Newport Beach, Calif.-based Pacific Crest, is dubbed the "CardGrabber," a handheld device about the size of a personal stereo.

The CardGrabber is actually a customer designed scanner that works with optical character recognition software designed by the company to enter all of the relevant information – name, company, address, phone and fax number – into the appropriate fields in a database program for Windows-compatible PCs. The hardware/software package has a $399 suggested list price. A version for Macintosh computer s is expected out early next year, says company President Rich Sondheimer.

One of the keys to the latest generation of laptop computers has been the development of add-on cards based on the PCMCIA (Personal Computer Memory Card International Association) standard. PCMCIA slots on many of the latest laptop computers will accept PCMCIA cards configured as everything from fax/modems to the equivalent of an add-on disk drive.

IBM, for example, offers a 14.4 kilobit/second fax/modem, 40MB and 105MB PCMCIA hard disk drives and network adapter cards. To facilitate data exchange between desktop PCs and PCMCIA-equipped laptops, the company also sells PCMCIA desktop adapters that essentially add a PCMCIA slot to a desktop PC.

Apple's Newton Messagepad 110 and telescoping pen

Beyond the workhorse portable computers and related devices are any number of niche products that can make work on the road a bit easier to handle.

Organizing for the Disorganized

About two years ago, former Apple Computer head John Sculley unveiled his vision of personal communication in the 21st century: a handheld device that would function as a combination videophone, wireless fax and electronic mail terminal, and electronic personal organizer. He dubbed the product a "personal digital assistant," and asserted that PDAs would quickly become essential business tools in the 1990s.

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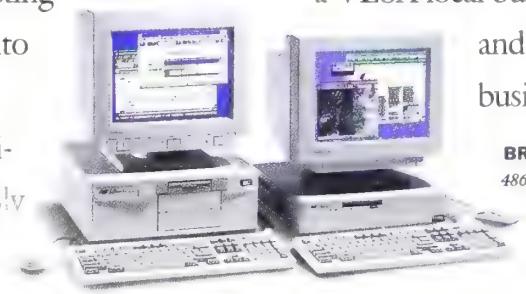

BRAVO LC *Intel DX4/100,486DX2/66, 486SX2/50, 486SX/33, 4 ISA slots including 1VL slot, 5 drive bays, Pentium OverDrive upgradable.* **BRAVO LP** *Inte 486DX2/66, 486SX2/50, 486SX/33, 2 ISA slots, 3 drive bays, Pentium OverDrive upgradable.*

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MT *Intel Pentium 60MHz, 486DX2/66, 486SX2/50, 486SX/33, 6 ISA slots, 6 drive bays, FlashBIOS. Pentium 60MHz includes 5 ISA and 2 VL slots.*

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Sculley has since departed Apple, but the company's first PDA, dubbed "Newton" is slowly introducing consumers, primarily business executives to the concept.

Over the last year or two, a growing roster of companies have introduced their own PDAs, also known as personal communicators. Among the major suppliers are AT&T, Sharp, Sony, Casio, and Tandy. Of that group, Sharp has introduced a Newton-compatible PDA, while Casio and Tandy have gone with their own joint design.

Whatever the specifics of the technology, all of those products are designed to perform essentially the same tasks: organize information and allow users to send electronic documents in some form over wired and in some cases wireless networks.

Both Sharp's PT-9000 personal information assistant and Apple's Newton, for example, contain handwriting recognition software, so that when users "write" on the devices' LCD screen, the writing is converted into text that can be stored or sent as either a fax transmission or electronic mail. The units also incorporate the electronic equivalent of a rolodex, a calendar, database, and other applications. And a variet of programs are under development from third-party software publishers, including city guides and expense management programs.

It will probably be several years, if not longer, before voice recognition begins to play any significant role as an interface technology.

San Jose, CA-based GeoSystems, for exam ple, earlier this year unveiled its Fodor's '94 Travel Manager software for Newton and Newton-compatible PDAs. The program includes data from the Fodor's line of travel guides that is cross-referenced with electronic maps and routing software developed for the Newton product.

While some of the first-generation charact recognition programs were sometimes balky and not completely accurate, subsequent gen erations from Apple and others appear to be much more reliable. Although voice recognitio

Sharp's Wizard OZ-9500

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It even shows you when everyon else is free. So you can schedule meetings with out a lot of legwork.

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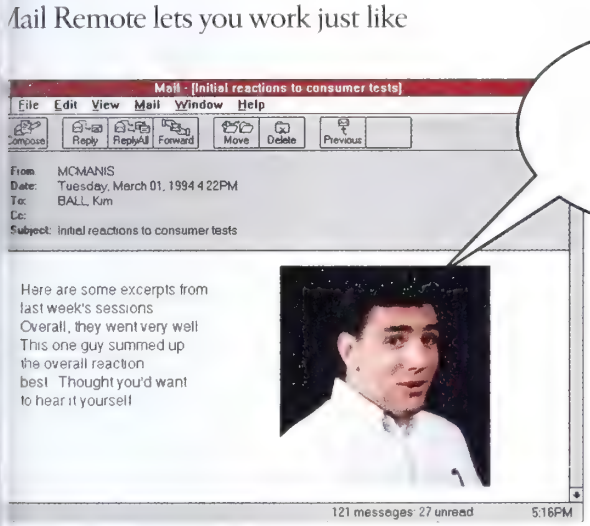
inally, with Mail Remote you can void disasters by staying connected hile you're on the road, because Mail Remote lets you work just like



Microsoft Mail gives you an infinite number of ways to be more persuasive. Send words, graphs, pictures and sound as mail messages. There's almost no limit to what you can send.

Schedule+'s alarm clock reminds you of meetings, deadlines, anything. So you'll stay organized and save time. Without it, we might have forgotten this caption entirely.

Microsoft

NEC UltraLite Versa

is slowly making its way into the personal computer market, it will probably be several years, if not longer, before voice recognition begins to play any significant rôle as an interface technology for personal communicators.

Apple's Newton sells for about $600 in stores in major markets, while similar products from other manufacturers can be found for anywhere from a couple of hundred dollars less than that to several hundred dollars more.

For about half that price, in some cases for significantly less than that, some manufacturers offer personal organizers without character recognition software, but with many of the rolodex and other organizing functions built in.

Sharp's OZ-9500 Wizard, for example, incorporates fax/modem software so that messages and other limited documents created on the organizer can be sent to fax machines or to personal computers and electronic mail services.

How to Cope When your Equipment Won't

It's nine in the evening, you've been working on a critical presentation that's due tomorrow morning for a new client and suddenly three weeks worth of work is trapped inside a hunk of metal and plastic that has stopped communicating with you.

Anyone investing in computer and telecommunications hardware and software can take some comfort from the fact that most of the product on the market today is more reliable and often easier to use than was the case even a couple of years ago.

Most of the product on the market today is more reliable and often easier to use than was the case even a couple of years ago.

PC hardware manufacturers in particular have devoted more time and money to handling the inevitable service problems. Almost all of them offer some type of warranty repair service with their products, and an increasing number of them provide on-site service – an option that previously was supplied only to large corporate customers.

AST, for example, includes a one-year warranty with on-site service with its Advantage line of personal computers. The warranty covers all of the hardware as well as software that comes bundled with the computer.

Buyers can extend that coverage for about $150 a year for on-site, or about $50 a year for carry-in service. "We also have on-line support," says Dennis Cox, AST director of marketing for consumer products. "We've got a user area on Prodigy and an info fax service."

The highly competitive nature of the PC marketplace has spurred some manufacturers to go even further with service and support.

The most critical service issues, though, usually involve lost data stored on a computer hard drive or some other storage device. And here, simply replacing one piece of equipment with another just won't do the job. What you're after is a way to recover the data.

Sharp's NX-1 home fax

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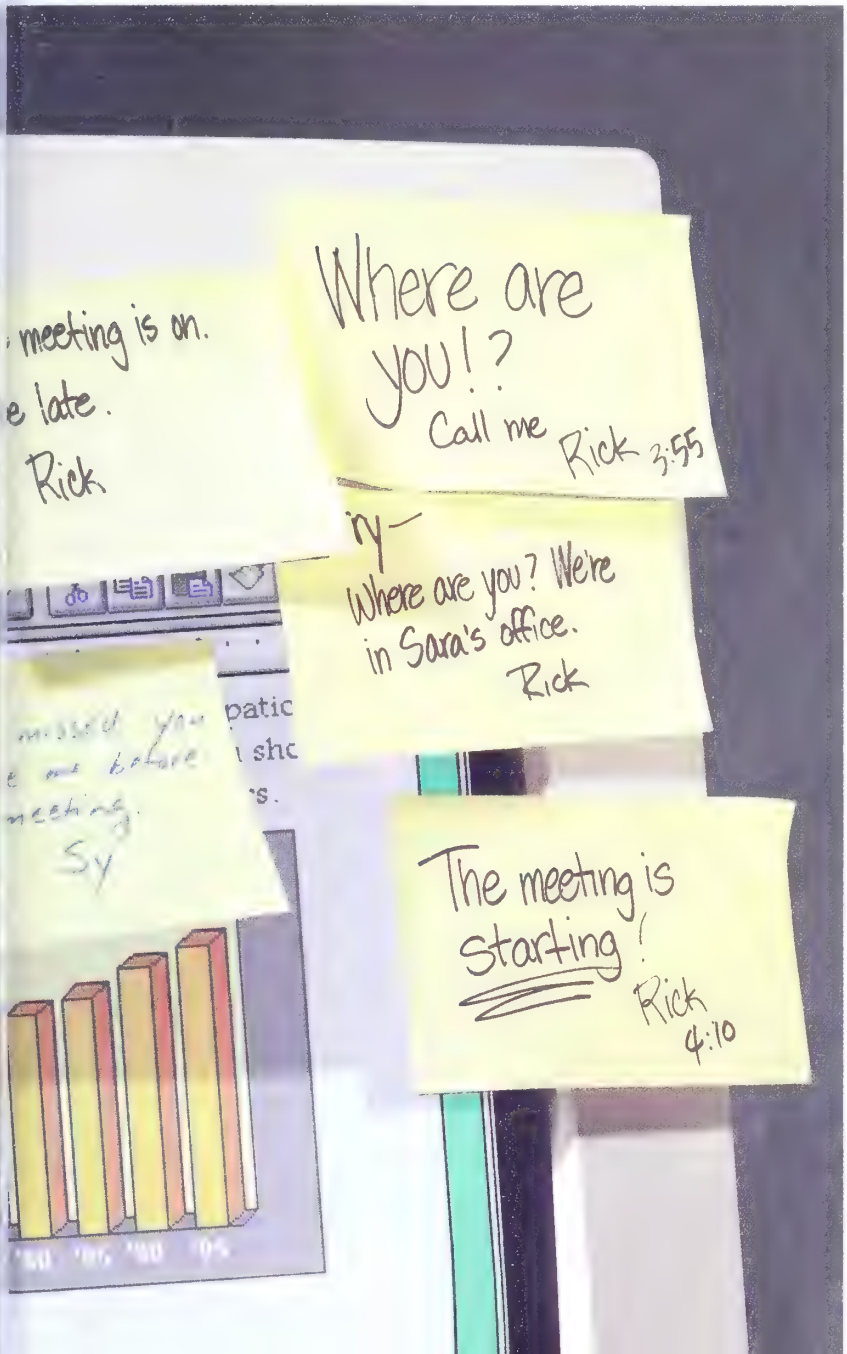

shouldn't take hours to figure out. You'll be using Schedule+ in minutes. Because it

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Microsoft

PREPARING FOR THE INEVITABLE

Since all equipment is going to fail eventually, it makes sense to take precautions up front to limit the damage when something does go wrong. Here are five simple steps to prevent equipment failure from short circuiting your business.

1. You've probably heard it before – most people who work with computers have it drilled into them – but still: Back up your work – twice for critical files. What you use can depend on the volume of your work; but always make copies of your work. For large chunks of data, a tape drive might make sense, while floppies are perfectly good for individual documents other relatively small files.

2. Before your warranty expires, find a reliable service organization. Referrals are usually the most reliable source – try computer users groups, on-line bulletin boards such as Prodigy, America Online, and CompuServe, or business associates who are happy with their repair services.

3. Only you know how badly your business will suffer from the loss of a computer, fax machine, or another piece of equipment, but at least consider an on-site service contract. Prices vary, but a couple of hundred dollars a year can save you the aggravation of unhooking and hauling a misbehaving component into a service center.

4. Particularly if you live in an area prone to lightning and other phenomena that can cause power surges and outages, invest in an uninterruptible power supply and a surge protector. A UPS will keep your system powered long enough to shut save your work and shut the system down in the event of a power outage. Surge protectors will prevent spikes in the electric current from damaging your equipment.

5. Participate in a computer users group. Most cities have local branches of computer users groups that meet either on-line or in-person to share tips on everything from getting the most out of different software programs to configuring hardware and coping with equipment problems. Chances are the problem that will confound you at the most inopportune moment has plagued someone else in the past. So why not benefit from their experience.

"Better than 90 percent of the time we can recover all of the data," says Stuart Hanley, manager of engineering for Eden Prairie, MN-based Ontrack Data Recovery, one of several companies around the country specializing in data recovery. The company runs 24-hours-a-day restoring data from everything from hard drives that have crashed to floppy disks that refuse to open files.

Ontrack charges $200 to diagnose a problem and anywhere from $600 to $3,000 to restore data, typical of the fees charged by other companies in this area. While that might be more than it's worth to recover some correspondence that had been archived, Hanley cites statistics from the National Computer Security Association that says it will take an average of 19 days at a cost of $17,000 to rebuild 20 megabytes worth of sales and marketing data.

Most software publishers have telephone help lines manned by technicians. Many of those services were free in the past, but as the number of end users grew steadily in recent years, many publishers have begun charging for support lines, often by using 900 phone numbers or some other form of payment.

The highly competitive nature of the PC marketplace has spurred some manufacturers to go even further with service and support.

Expanded customer support is also a central feature in four new IBM PCs for their PS line. All of the new PCs come with IBM OnHousecall, a troubleshooting software package that allows users to access technical support over phone lines. The new models include a 486SX-33 MHz and a 486DX2-66/33 MHz configuration. Suggested list prices range from $1,299 to $2,599, depending on microprocessor and hard drive capacity.

As is the case with many other personal computer manufacturers, IBM has developed a variety of service and support options for its PC lines. Last April, the company announced a "Customer Protection Plan" for its recently introduced PS/ValuePoint line of 486 and 38 personal computers.

All ValuePoint PCs come with what IBM has dubbed "HelpWare," a comprehensive support package including 24-hour a day, seven-day a

Does it feel like things get out hand when you leave town? icrosoft® Mail Remote keeps you control. Because it puts all the wer of electronic mail right on ur laptop. So whether you're in Windows™ operating system or MS-DOS,® you can work just like you do when you're in the office.

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With Microsoft Mail Remote, the best-selling remote program for Windows, you'll always be in touch and working just like you do in the office. And with RAM wireless service and Intel's wireless modem, you don't even need to be near a phone.

Microsoft

iel RAM MOBILE DATA

week telephone support, free on-site warranty service for the first year, and leasing options for business customers.

IBM's Customer Protection Plan offers buyers different options to extend service and support coverage beyond the one-year warranty. Customers can choose from on-site service within four hours of making the call, to next day service, and the extended warranty program can be applied to either the entire system or individual components, such as monitor, keyboard and hard disk drive.

And just last month, IBM unveiled its ValuePoint Performance Series, with a three year warranty – including on-site service for one year and walk-in service after that. The Performance Series includes 38 standard models, although IBM will also tailor configurations for individual customers. Pricing on the new line ranges from $1,300 to $3,000.

A computer screen can be more conducive to finding new business contacts than a hotel ballroom.

Making the the Connection

Networking used to be what business people did at cocktail parties at trade shows, but today, a computer screen can be more conducive to finding new business contacts than a hotel ballroom. On-line networks comprise one of the most important business tools of the 90s, at least for those who have learned how to navigate along the electronic arteries of the information superhighway.

Connecting to on-line networks requires a computer, a communications software package and a modem to translate digital data to electronic impulses and back again. With the cost

THE NEAR-PAPERLESS OFFICE

Nowadays, when anyone mentions the term "paperless office" it's usually a rueful joke and a reminder that – regardless of how far and fast technology advances, someone somewhere is going to ask for the hard copy.

But that doesn't mean an office requires a wall of file cabinets to hold those documents until needed.

Electronic document management systems – particularly the more sophisticated versions – remain at a fairly high end of the office equipment universe. Few small businesses, after all – and even fewer people who run a business from their home office – need or can afford document management systems costing $20,000. But prices are coming down, and in the meantime, there are different options.

Sunnyvale, Calif.-based MindWorks Corp. in April unveiled what the company claims is the first low-cost document management system for desktop PCs. The Knowledge Builder system includes document image management software with auto indexing, a gray scale scanner with automatic document feeder, a removable magnetic cartridge storage device that comes with one 270 megabyte cartridge, and a SCSI interface kit.

The system has a suggested list price of $2,995, or $1,295 without the scanner.

For businesses with greater document storage needs – and a budget to match – there's Canon's Canofile 250, a high-volume document management system that converts hard copy to electronic images that are indexed and stored on optical discs. The built-in scanner can copy 40 pages a minute of two-sided documents.

The device is best used for specific applications, such as storing accounts receivables or service records, notes Bill Leonard, national sales manager for Canon's Image Filing Systems division. "When you talk to someone about their record keeping problems, there's usually one sore thumb that stands out," he says.

The Canofile 250 sells for between $15,000 and $20,000, depending on configuration – printer, keyboard and external drives for data backup. An optional Canon external CD-ROM drive also allows documents to be retrieved by a desktop PC.

Canon's Fileprint 100 and Canonfile 250

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IBM

of communication perhaps $150 to $200 over and above the price of a PC, connecting to on-line information networks represents one of the true bargains of the information age.

The major on-line networks include CompuServe, based in Columbus, OH, America Online, in Vienna, VA, and Prodigy, headquartered in White Plains, NY, all of which straddle the line between consumer services and a business resource. All three offer news services, access to information databases and electronic mail. CompuServe, in particular, hosts a variety of electronic forums for everything from multimedia to consumer electronics. Most computer software retailers offer sign-up kits that include the necessary communications software, and often free usage time up front.

All three networks also allow users to send electronic mail along the Internet, the autobahn of the information superhighway. The Internet is actually a series of information databases linked together around the world, with electronic gateways providing access for perhaps $10 to $30 monthly, depending on usage. Although the Internet began as a government sponsored connection for university libraries and other research institutions, it is rapidly becoming an important business tool as well.

"The percentage of traffic for commercial use is now the single major identifiable growth segment on the Internet," says Mary Cronin, University Librarian at Boston College and author of "Doing Business on the Internet" (Van Nostrand Reinhold). "A lot of smaller companies are finding it a breakthrough in long distance sales, especially to other countries," he says. "They're using it either for supplier-customer relationships, or to find business partners."

Navigating among all the different databases can appear to be a daunting task . . . but an increasing number of gateway providers will help users find their way around.

One of the latest – and most ambitious – projects to tap into the Internet is CommerceNet, announced earlier this year and due to go into full operation this summer. Created by a consortium of Silicon Valley companies, with support from the federal government's Technology Reinvestment Project and the State of California, CommerceNet will hold on-line product catalogs, product literature, and electronic order forms for participating companies. "Job shops," according to the founding members, will provide on-line access to engineering and manufacturing services. Because of the vast number of information databases that can be accessed through the Internet, the network is also a valuable source of everything from demographic data to technological abstracts.

Navigating among all the different databases can appear to be a daunting task, at first, but Cronin points out that an increasing number of gateway providers will help users find their way around. "The providers are becoming aware that business customers need help up front to use the Internet," she says. "It's become something of a buyers market [for access to the Internet]." In addition to Cronin's book, which includes a listing of Internet gateways, The Internet Society (713/648-9888) is a good source of Internet providers. The Internet, until recently, was limited to text and numerical communication, but the development of graphics tools has provided the means for advertising companies, for example, to send artwork and even video to clients over the Internet. Cronin notes that Microsoft later this year is expected to release a new version of Windows that incorporates Internet capabilities.

AST's Advantage!

This text was written by Martin Levine who specializes in consumer electronics and home entertainment.

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TO THE RESCUE OF CREDIT LYONNAIS

Can Jean Peyrelevade turn around France's monumentally troubled state-owned giant?

In his trademark sleeveless sweaters and with half-frame glasses dangling from his neck, Jean Peyrelevade looks more like a rumpled country schoolteacher than the head of the world's biggest bank outside Japan. The low-key boss of France's Crédit Lyonnais hardly seems the man to seize a client's furniture. Yet Peyrelevade stunned France in late May by sending gendarmes to impound the possessions of Bernard Tapie, a businessman and politician—and a Lyonnais borrower for 20 years. The bank says Tapie defaulted, a charge he denies.

The brash move by Peyrelevade did more than tie down $50 million worth of Tapie's assets. The seizure also broadcast a message: Crédit Lyonnais, the ill-starred giant of European banking, is changing under the leadership of Peyrelevade, who succeeded the ousted Jean-Yves Haberer last November. Whether or not politics led the state-owned bank to fund Tapie and other pals of France's Socialist rulers, Peyrelevade is eager to show that, from here on in, Lyonnais must be run as a profit-driven outfit like any other.

The new chairman must do far more than launch headline-grabbing asset seizures, however. In salvaging his monumentally troubled bank, Peyrelevade, 54, faces a task arguably tougher than John S. Reed's struggle to save Citicorp—the disaster bank of the 1980s. Size alone puts Lyonnais in a different league: Its assets of $350 billion top those of Citi and Chase Manhattan Corp. combined. Its U. S. operations make it one of the 25 largest banks in America.

BIG BILL. The reason for a sense of urgency is that Lyonnais is reeling from the aftershocks of a dizzying growth spurt under Haberer. Dubbed "the Napoleon of French banking," the former chairman bought banks around Europe at high prices, plunged into U. S. corporate lending, and bought big equity stakes in French companies. He also threw money at an all-star cast of shaky clients: the late Robert Maxwell, bankrupt developer Olympia & York Developments Ltd., and Italian financier Giancarlo Parretti. But global recession halted Haberer's expansion binge, as losses and bad-debt provisions soared (charts). The bank financed Parretti's ill-fated takeover of Metro-Goldwyn-Mayer Inc. in 1990, for example, and is now the troubled studio's reluctant owner, with $2.3 billion in exposure (page 116).

PEYRELEVADE AIMS TO CREATE A McDONALD'S-STYLE EUROBANK—WITH A UNIFORM NAME AND PRODUCT IN EVERY COUNTRY

As his empire collapsed, Haberer was exiled to a smaller state-owned bank last fall, leaving a big bill French taxpayers. Hab declined to be intervie But under a bailout that relevade engineered March, the state is tak over $7 billion in risky l and will hand Lyonnais $850 millio new capital. Now, Peyrelevade, a v ran financial executive and onetime ernment official, is plotting a reco strategy to prepare the bank for vatization. To make the bank's sh attractive to investors, the new

t figure how to turn a profit from ope's largest banking network: 3,750 nches, of which 1,000 are outside nce—mostly the results of pricey Ha- r acquisitions.

eyrelevade is also shaking up man- nent. He has eased out a dozen top agues. Latest to go, in mid-May, the executive vice-president who saw MGM, François Gille. This th, a key new hire comes aboard: al Lamy, the forceful top lieutenant European Commission President ues Delors. Lamy won't have a spe- job at first. Peyrelevade says he'll d several months "walking around looking at things"—an ominous pros- for the bank's 71,000 employees.

deed, with overhead at Lyonnais g up 70% of the bank's revenues—at 10% more than at many interna- l banking competitors—10% of the 's jobs in France and 4% of those where in Europe are likely to go.

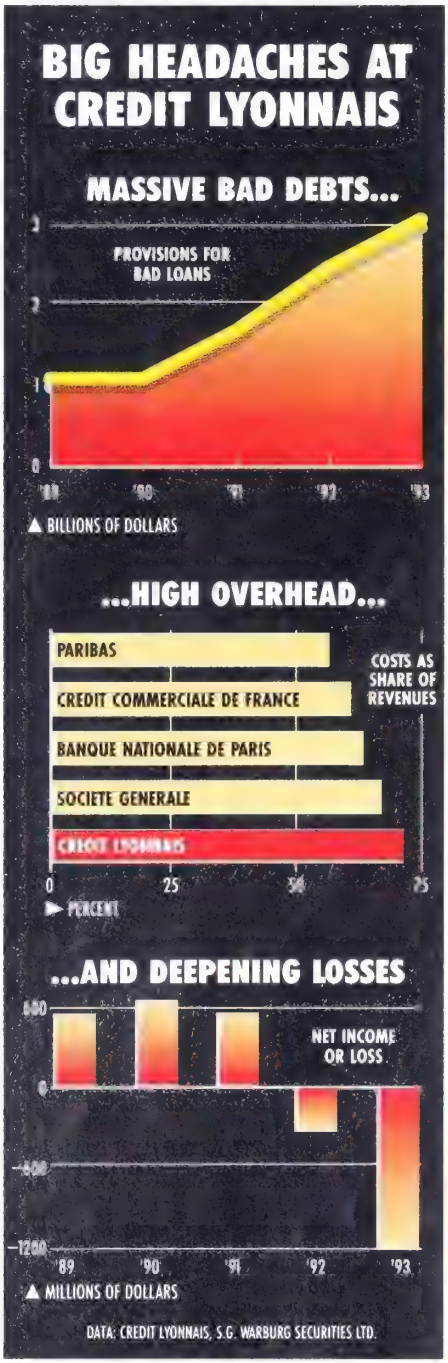
ne last element of Peyrelevade's egy is his hope of selling at least of Lyonnais' $11 billion industrial folio (table, page 116). Losses from e investments, especially steelmaker or Sacilor, helped ruin the bank's m line last year. Says Peyrelevade: incomprehensible that a bank should a fashion house, a hotel chain, a club, and an airline."

CABAL. Such talk would have been sy in a state-owned French bank a years ago. In a way, Peyrelevade's eover of Crédit Lyonnais is a meta- for France's search for a new ver- of Gallic economics. The French always seen capitalism as a cozy l of cross-holdings and mutual back- tching, often orchestrated by the e. Banks frequently prop up Air nce, Aerospatiale, and other cash- ry symbols of national pride. But igh cost of misdirected resources is ng France to change course. Al- gh *dirigisme* is far from dead, the ch are privatizing a score of banks industrial companies and are preach- competitiveness.

édit Lyonnais symbolizes this shift— so does its chairman. As a top aide Socialist Prime Minister, Peyrele- played a major role in nationalizing stry after the 1981 election of Pres- François Mitterrand. He still terms self a "man of the left," but, like other French Socialists, he has ged his spots

eyrelevade's struggle to rebuild nce's troubled bank also carries y meaning for Europe's vision of omic unity. Efficient trans-European cial-service networks were supposed a key result of the vaunted single ket. But lots of banks have jumped ers—and then jumped back in the face of entrenched competition and high costs. Chase Manhattan, Lloyds Bank, and Banque Nationale de Paris have pulled back, and in May, Britain's National Westminster Bank PLC shuttered its 10 Paris branches. Few expect Peyrelevade to succeed, either. "Retail banking doesn't look very tempting," says Deutsche Bank chief Hilmar Kopper.

Indeed, one credit-rating service official estimates that Germany's BfG Bank, which Haberer bought 18 months ago for $900 million, has already produced as much as 20% of Lyonnais' bad-loan provisions. But Peyrelevade steadfastly defends his concept of a McDonald's-style Eurobank with a single name and uniform products in every country. "If you believe in a single market and a single money, as I do," he says, "banking in Frankfurt will be no different from banking in Paris. Retail banking is where we'll make money in Europe."



POKER-FACED. It's not as if Peyrelevade wanted to leap into the maelstrom at Lyonnais. When the conservatives moved to oust him from the chairmanship of France's biggest insurer, Union des Assurances de Paris (UAP), and install one of their own, Peyrelevade fought to stay on. His bid failed, but the conservatives gave him Lyonnais as a consolation prize. Earlier, in 1986, politics had got him fired once before, as chairman of Compagnie de Suez.

Despite Peyrelevade's Mediterranean origins—his father was a Marseilles schoolteacher—he is as poker-faced as a sphinx. "He never ever gets angry—and he hates anger in others," says one associate. A French executive recruiter goes further: "He's unbelievably cold. It takes a lot for him to crack a smile." Yet Peyrelevade speaks candidly, and, in contrast to the aloof Haberer, is a collegial manager who solicits others' opinions. Sober in his tastes, Peyrelevade was shocked at the luxurious dining room Haberer installed at Crédit Lyonnais, says an aide. He is so unconcerned with fashion that legend has it he buys his unstylish suits from a mail-order catalog and has his wife knit his sweaters. In his free time, Peyrelevade scours auctions collecting 19th century copies of Renaissance furniture. Originals are too expensive, he says.

Calm though he may be, one subject gets a rise out of Peyrelevade: the investigation of Haberer's costly lending policies, launched in May by France's Parliament. The probe, which is being conducted in secret and could last six months, has been demanded for years by François d'Aubert, a centrist member of Parliament who smells Socialist favoritism behind Lyonnais' lending. Parretti and the bank also have countersued each other repeatedly. In March, the Italian filed a $3.9 billion suit charging that Lyonnais fraudulently removed him from MGM management. Lyonnais denies the charge.

Although Peyrelevade admits his turnaround effort may produce even more unhappy surprises, he expects to break even this year and report a profit by 1995. If market conditions permit, the chairman is expected to sell to the public an $850 million equity stake late this year, "to prove people think the bank has a future." But full privatization is unlikely before 1997—the year Peyrelevade expects an "acceptable" profit of $525 million to $700 million.

One prong of Haberer's strategy that

A
TH

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10 Years 18.8% ★★★★★	10 Years 13.2% ★★★★
15 Years 16.7%	15 Years 13.6%
19.5 Years†† 15.6%	19.5 Years†† 13.9%

*Source: Lipper Analytical Services, Inc. †Morningstar proprietary ratings reflect historical risk-adjusted performance as of 3/31/94. The ratings are subject to change every month. Morningstar ratings are calculated from the funds' three-, five- and ten-year average annual returns in excess of 90-day Treasury bill returns with appropriate fee adjustments and a risk factor that reflects fund performance below 90-day T-bill returns. 1,182 equity funds were rated: 10% of the funds in an investment category receive five stars and 22.5% receive four stars. ††Berger Associates assumed management of the Funds 9/30/74.

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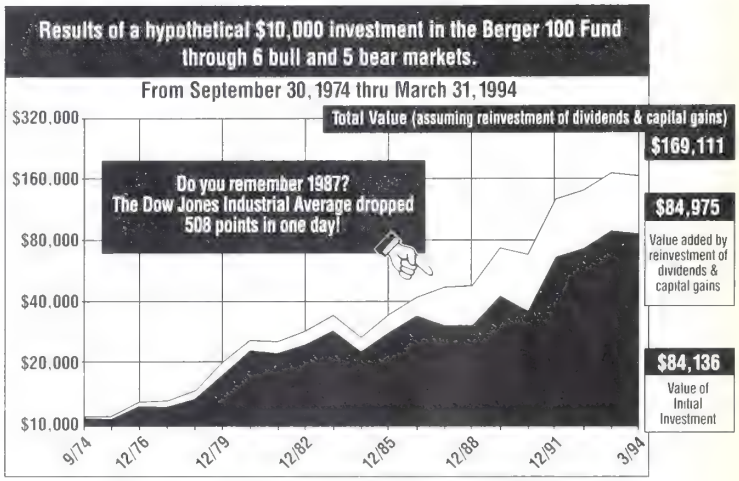

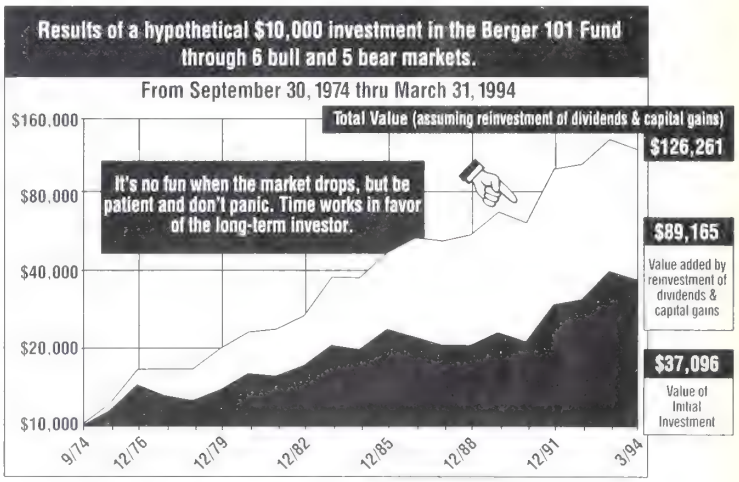

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needs no fixing is the bank's booming U. S. corporate-lending unit. A high-profit money machine, it competes aggressively with American banks for domestic loans. It was the eighth-largest U. S. loan syndicator in this year's first quarter, beating Chase Manhattan and all foreign banks except Bank of Nova Scotia. The unit's assets grew 6% last year, to $37 billion—11% of Crédit Lyonnais' world total.

Lyonnais has also profited nicely from its $1 billion-plus investment in New York dealmaker Leon Black's Apollo Partners. After making a bundle buying distressed junk bonds and real estate, Apollo is now attempting to raise a further $1 billion. But some observers see that as a sign that Black, concerned that Peyrelevade's interest in Apollo's activities will diminish as he concentrates on lending in Europe and the U. S., is now seeking other backers. Lyonnais insiders insist that the bank will maintain its links to Black, but a source says the bank probably wi join the latest offe

Peyrelevade has l of refocusing to throughout his dora His quest to give Lo nais a new sense o rection may be as a struggle as squea old-style French ca ism into a free-ma mold. Peyrelevade's ber, feisty style ng do the trick—provi a model that b France and Eu need. With luck a strong managemen might turn Habe Napoleonic dreams reality. But it's e he'll have more tro facing down the great banks of Eu on their home turfs than sending e darmes after errant debtors.

By Stewart Toy in Paris, with Bi vetski in London and William Gla in New York

CREDIT LYONNAIS' CROWN JEWELS

Crédit Lyonnais Chairman Jean Peyrelevade says he'll sell $11 billion worth of choice assets to raise capital for his troubled bank. Here is a roster of its more valuable holdings:

Company	Industry	Percent of equity held
MGM	Entertainment	100.0%
FNAC	Retailing	66.0
ARNAULT	Luxury goods	29.5
USINOR SACILOR	Steel	20.0
ADIDAS	Sportswear	19.9
AEROSPATIALE	Aerospace	18.0
BOUYGUES	Heavy construction	10.0
RHONE-POULENC	Chemicals	6.0
TOTAL	Oil	3.4
LAGARDERE	Publishing, defense	3.0

DATA: CREDIT LYONNAIS, BUSINESS WEEK

CAN LYONNAIS MAKE MGM ROAR AGAIN?

Metro-Goldwyn-Mayer Inc.'s headquarters in Santa Monica, Calif., bears the unmistakable marks of faded glory. The 12 Oscar statuettes that adorn its lobby are from many years ago. And one of them is a fake, standing in for a statue that MGM's embattled former owner, Giancarlo Parretti, gave away to a friend in 1990. MGM probably won't expand this collection soon. After being sapped of cash and creativity for years, the once-proud studio is still hurting.

But MGM's owner, Crédit Lyonnais, faced with a three-year legal deadline to sell it, is mounting a valiant effort to regain its lost greatness. Lyonnais Chairman Jean Peyrelevade is rubbing his hands at the advent of the multimedia revolution and watching as buyers pay fat prices for Paramount Pictures Corp. and other studios. "If we can organize a studio that produces good films," says Peyrelevade, "MGM will be worth a lot." He says investment bankers tell him it should fetch $2 billion or "maybe more."

HAPPY ENDING? Most film industry sources think that getting MGM to break even will be an epic struggle. The studio has lost $1 billion over the past three years. Since foreclosing on borrower Parretti and taking over MGM in 1991, the bank has also forgiven nearly $1 billion in debt and added a new $400 million line of credit. That means Crédit Lyonnais has invested or committed $2.3 billion so far. The studio will need still more money this year to boost its annual output from 8 films to 20. Studio executives are negotiating with other banks for an additional $300 million in loans.

GETTING EVEN WITH DAD: ONE RAY OF HOPE FOR THE STUDIO IS THIS SUMMER'S CULKIN-DANSON COMEDY

Complicating the studio's problems, Carolco Pictures Inc., which had been counted on to produce big-budget films for distribution by MGM, has also run into some financial trouble. And MGM's previous owners have sold off the rights to a chunk of its 2,000-film library.

The job of producing a happy ending for MGM has been dumped into the lap of Frank G. Mancuso, 61-year-old ex-chairman of Paramount. The film vete- ran has reassemb large pieces of Paramount mana ment team plus spected outsiders. siders are say MGM's prospects co brighten this summ when it relea *Blown Away*, a To my Lee Jones thril and *Getting Even w Dad*, a comedy st ring Macaulay Cul and Ted Danson. *Bl Away* is already boo into an impress 1,800 theaters for July 1 opening.

In fact, Peyrelev argues that MGM's cash f should turn positive n year. In five years, he sa the studio will have rec ered all the rights of its f library, boosting the stud value to a multimedia buyer. Peyr vade is counting on MGM's new cas executives to turn those hopes into ality and remove a huge burden fr his troubled bank.

By Ronald Grover in Santa Mon with Stewart Toy in Paris

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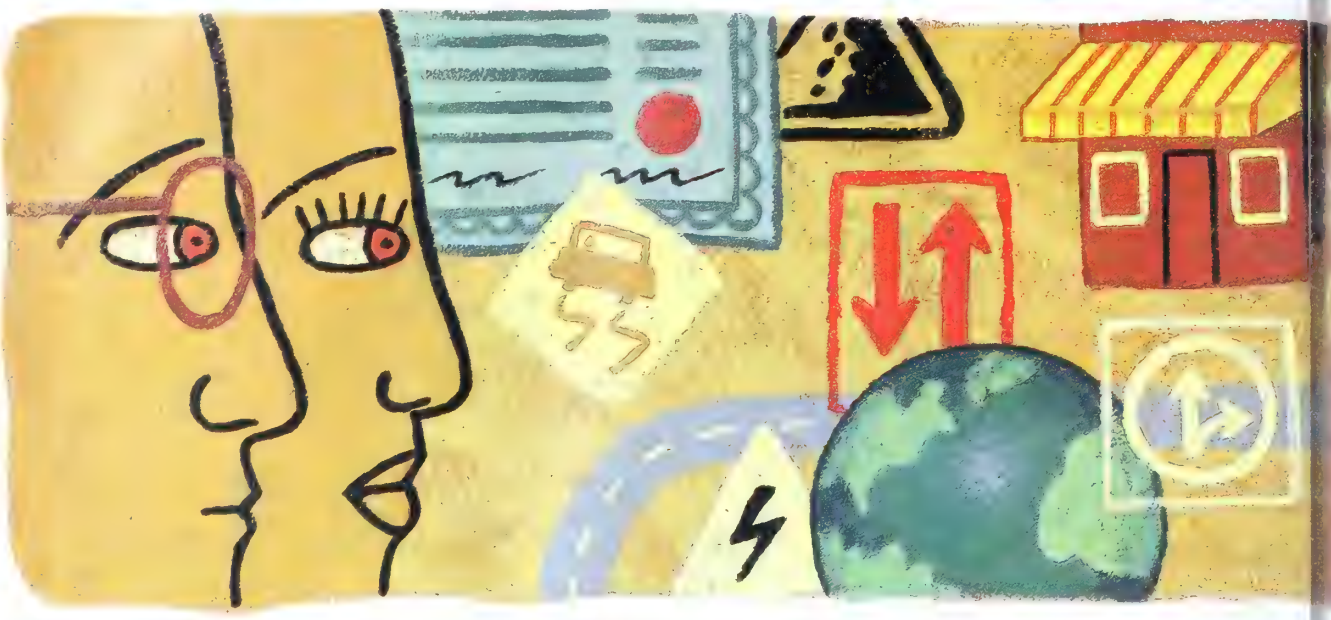

WHERE TO INVEST

The Fed hasn't made things easy, but this guide should help

Some investors are learning it for the first time, while others are painfully reacquainting themselves with the most basic rule of the financial markets: Wall Street is two-way.

Sure, in theory, everyone knows that. But it has been a long time since investors lived through a gut-wrenching market decline. U. S. stocks climbed steadily into record territory from October, 1992, until February of this year without missing a step. Then they stumbled, dropping 10% in eight weeks. The bond market's surge ended in late 1993, but it wasn't until February that bond prices started melting like an iceberg in the tropics.

Sure, it has been scary. But the markets and most investors—save a few ultraleveraged hedge funds that made bad bets—have survived very well. Stocks have come back to the levels at which they started the year. Not so bonds. But bonds have rallied back from their lows. Yes, it's safe to go back in the water again. That the theme of BUSINESS WEEK's Midyear 1994 Where to Invest—a guide to investment survival and success in the second half.

The Federal Reserve's actions have set the tone for this year's markets. The central bank hiked short-term interest rates four times in as many months to cool the economic expansion lest it turn inflationary. The market decline was a reaction to those rate increases.

What has many investors nervous is that the Fed's track record on raising rates to lower the pace of the economy has been mixed. William E. Dodge, portfolio strategist for Dean Witter Reynolds Inc., remembers when it worked. He sees the current tightening and market reaction as similar to what happened from mid-1983 to mid-1984. "The economy was expanding very rapidly, long-term interest rates shot up, and the Fed

ILLUSTRATIONS BY JAMES STEINBERG

htened," recalls Dodge. The stock market declined %, but the pullback cleared the way for a 124% move er the next three years. The Fed attempted another nomic "soft landing" in 1989—and, notes Richard S. Hu- n of Crabbe Huson Group, a pension and mutual fund nager, "the landing gear smashed right through the ngs."

As for the Fed's moves this time, so far so good. The SINESS WEEK survey of economists in the accompanying onomic Outlook (page 120) shows a belief that higher erest rates will do the job of wing growth without sending e economy into the tank. If ey're right, that's a big plus for e markets.

Of course, a slower-growing onomy will force investors to e-tune their portfolios, dropping me of the cyclical companies for e growth stocks that don't need ard-charging economy to thrive age 122). Investors may also ke a look at some of the small- pitalization stocks, a market ere a good product or service n make big bucks for compa- es and their shareholders no atter what the economy is doing age 126). For other insightful in- stment ideas, turn to Inside all Street (page 160).

Equity investors should look road for opportunities, as well. ne European economies are fi- lly coming out of the doldrums, and even Japan, with the industrial world's strongest market in the first half, is picking up (page 136). And the emerging markets, which are in a slump so far this year, still offer attractive opportunities. It's not surprising that of the four professional investors whose stock picks we've tracked since December, the pro with the global portfolio is the winner thus far (page 130).

It's also time for buyers of bonds—both taxable and tax-exempt—to step up to the plate. There are bargains in today's nervous market (page 142). Want to bet on lower interest rates—or higher rates, if that's your conviction? Turn to page 154 for the lowdown on how to play the fast-moving bond market through options.

Of course, you may not want to bother with the trouble of selecting individual stocks and bonds. That's where mutual funds help. Turn to page 148 for an up-to-date look at which funds lead the pack. Precious-metals funds, last year's sizzlers, are in the red so far this year. Gold bullion isn't attracting much interest, either (page 152). If you want to know what's hot, check out page 158.

Sure, for a while, the financial markets looked like a one-way road heading south. But the traffic is starting to move in the other direction. It's time to head north and hit the gas.

By Jeffrey M. Laderman in New York

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THE GROWTH SCENARIO: NICE AND EASY

GDP should slow to below 3% by yearend—the soft landing the Fed has been aiming for

WHERE TO INVEST

Sheriff Alan Greenspan knows that inflation can be one tough hombre. That's why the Federal Reserve Chairman and his posse have been peppering that notorious bandit with a round of warning shots. The question now: Did the economy get caught in the cross fire?

As BUSINESS WEEK sees it, the economy will not escape unscathed from the Fed's four hikes in interest rates since February. But for the coming year, at least, it should keep chugging along at a steady, if slower, pace.

BUSINESS WEEK expects the economy to grow 2.9% in the coming year, measured from second quarter to second quarter, a shade higher than the 2.7% average of the 20 forecasters we surveyed in early June (table). If this quarter's growth comes in as expected at about a 3½% annual rate, the economy's pace over the past year will have been a much sturdier 4%.

Almost all forecasters expect some degree of slowdown, but the timing varies. Indeed, "the range of opinion on the economy, inflation, monetary policy, and the markets is very wide at present, and there's little on the horizon to narrow it," says Donald H. Straszheim at Merrill Lynch & Co. That's a formula guaranteed to keep the financial markets unusually volatile in coming months. As it is, the Fed's hikes have already hit many investors in stocks and bonds, both in the U. S. and around the world. A weaker dollar has also hurt.

We believe that growth will slow to below 3% by the fourth quarter and remain there through the first half of 1

The Fed's big guns may keep inflation on the lam, but has the economy gotten caught in the cross fire?

A big reason is that the Fed's tighte has some sectors nursing flesh wou and one big booster to consumer sp ing—mortgage refinancing—took a through the heart. Interest-sensitive tors such as housing, autos, and ho related durable goods won't be the s big players in coming quarters that were last year. After all, it was rates in 1993 that finally energized previously anemic expansion.

Despite higher rates, the economy tains enough momentum to keep erating jobs, incomes, and profits. Th why consumer spending, especially nondurable goods and services, and b ness investment in equipment will tinue to power growth. In particula the effort to streamline operations cut costs, companies' push toward technology will fuel another yea strong growth in capital spending equipment. But even here, outlays unlikely to keep rising at the 18% a al pace they logged during the p

That's especially true in the face of ır borrowing costs, an uncertain eq- market, and somewhat less bullish growth as the economy slows and ıg power remains almost nil.

nsumers are unlikely to maintain revved-up pace of spending as well. have lifted their inflation-adjust- ıtlays for goods and services at an ıl rate of about 4.5% for three quar- ıow, although aftertax income rose 2.9%. That disparity has dropped avings rate's six-month average to ıy 3.7% of aftertax income. So con- rs may choose to start rebuilding nest eggs.

reover, "the housing recovery is " says Gary L. Ciminero at Fleet ıcial Group Inc.—and with it go the outlays on durable goods that fu- he recent spending spree. But now consumers have bought beds, re- ators, and cars, they will have to ıase the linens, food, and tune-ups ıccompany those big-ticket items.

course, housing was set to slow)4 even before the rate runup. Af- ll, the homebuilding upturn is al- three years old, and the smaller :ysomething generation has fewer e in the prime home-buying age). Now, higher rates assure that ng is peaking, and homebuilding even be a drag on growth in the d half. The two percentage point ıse in 30-year fixed-rate mortgages last October has raised the qualify- nnual income for a $100,000 mort- by a hefty $7,000.

FEAT. Also, 1993's low interest rates ıot be around to soften the blow fiscal drag, as they did last year the bond market rallied in re- e to the Clinton Administration's :s to narrow the federal budget Now, long rates are back up sharp- en as the shrinking deficit contin-) drain stimulus from the economy. wer growth is exactly what the ıas in mind, but history carries a ing. For the second time in six , the Greenspan Fed is attempting e feat: By hiking rates, the cen- ank is trying to keep inflation on am without tipping the economy ı recession, which is where nearly ıst tries at a "soft landing" have l up.

is time may be different. To begin in an unusually bold move, the al bank acted well before any evi- of inflationary pressures. Annual mer price inflation is only 2.4%, rice pressures may still be held in even after more than three years nomic growth. First, the improving lying trend of productivity is hold- own unit labor costs. Also, overseas etition is limiting price hikes, and offshore and foreign capacity makes supply bottlenecks less likely.

Not only that, the increase in the overnight federal funds rate—the Fed-controlled anchor for money market rates—is one of the steepest four-month hikes on record. The rate has risen from 3% on Feb. 4 to 4.25% currently. All this raises the odds that growth will moderate and that little further tightening is needed to keep policy in the "neutral" setting the Fed desires—neither stimulative nor restrictive.

We expect no more than a further half-point rise in the funds rate this year. If so, the duo of slower growth and tame inflation will calm the recent selling frenzy in the bond markets both here and abroad. Those forecasters who see stronger growth and a later-arriving slowdown, however, see much more Fed tightening—with federal funds at 5.5%—and still higher bond yields.

Amid a cooler pace of domestic spending, however, the economy can count on a little more help from demand overseas. By this time next year, the now nascent recoveries in Europe and Japan will have more punch, and U. S. exporters will feel the lift. The problem: A flood of imports will offset much of the growth impact of greater exports. So, the Merican trade deficit will get worse before it gets better, increasing the dollar's vulnerability. Indeed, another round of dollar weakness, and its inflationary implications, is a wild card in the outlook that could upset the touchy financial markets and possibly lead to more Fed tightening.

REBOUNDING CRUDE. Another surprise could be higher oil prices, stoked by economic recoveries in Europe and Japan, and by a delay in Iraq's reentry into the oil market. "People had talked about $10 oil," says Charles Lieberman at Chemical Securities, "but already prices have rebounded to more than $18 per barrel." In addition, Michael R. Paslawskyj at CIT Group warns that an eyeball-to-eyeball confrontation with North Korea would slam consumer confidence just as the Fed is trying to slow the economy, in what would be an eerie replay of the gulf war recession scenario of 1990.

But barring any shocks, the coming year should be to the liking of households, businesses—and policymakers. The Clinton Administration will worry less about rising interest rates, and the Fed should be able to hang up its guns for a while and enjoy the tumbleweed roll of slower, noninflationary growth.

By James C. Cooper and Kathleen Madigan in New York

WHAT ECONOMISTS ARE FORECASTING

	Percent change in real gross domestic product					
	1994			1995		IIQ '94
	II	III	IV	I	II	IIQ '95
CHARLES LIEBERMAN Chemical Securities	4.5	4.4	3.9	3.6	3.4	3.8
JASON BENDERLY Benderly Economic Associates	4.7	4.7	4.0	3.5	3.0	3.8
DONALD RATAJCZAK Georgia State University	4.0	4.0	3.5	3.6	3.2	3.6
PAUL W. BOLTZ T. Rowe Price Associates	4.3	3.4	3.6	3.2	2.8	3.3
MICHAEL R. ENGLUND MMS International	4.0	3.0	3.5	3.0	3.0	3.1
NANCY J. KIMELMAN Technical Data	3.2	3.0	3.4	3.0	3.0	3.1
MICKEY LEVY Nationsbanc Capital Markets	4.5	3.7	2.6	3.0	2.8	3.0
DONALD H. STRASZHEIM Merrill Lynch	3.5	3.1	3.0	2.8	3.0	3.0
JAMES C. COOPER, KATHLEEN MADIGAN BW	3.4	3.1	2.8	2.9	2.6	2.9
CONSTANTINE SORAS NYNEX	4.1	3.0	2.5	3.3	2.3	2.8
LAURENCE H. MEYER Laurence H. Meyer & Assoc.	3.5	3.1	2.7	2.7	2.8	2.8
STUART G. HOFFMAN PNC Bank Corp.	4.0	2.5	2.6	2.8	2.8	2.7
SUNG WON SOHN NorWest	4.0	3.5	2.5	2.5	2.0	2.6
DAVID M. BLITZER Standard & Poor's	3.9	3.5	2.6	2.4	1.2	2.4
PHILIP BRAVERMAN DKB Securities	2.5	2.0	2.0	2.5	2.5	2.3
GARY L. CIMINERO Fleet Financial Group	3.5	2.3	2.4	2.1	2.3	2.3
KENNETH T. MAYLAND KeyCorp.	3.1	2.8	2.2	2.0	1.5	2.1
HOWARD KEEN Conrail	2.7	2.1	1.1	2.1	1.5	1.7
MICHAEL R. PASLAWSKYJ CIT Group	3.0	2.3	1.8	1.5	1.2	1.7
ROBERT H. PARKS Robert H. Parks & Associates	3.0	3.0	2.0	0.0	1.0	1.5
AVERAGE	3.7	3.1	2.7	2.6	2.4	2.7

DATA: BUSINESS WEEK

STOCKS MAY WARM TO THE FED'S COOLDOWN

The market looks ready to build on some hidden strengths

WHERE TO INVEST

Even in bull markets, stock market investors have crises of confidence. They fret about the next turn in the economy, surges of inflation, unwelcome surprises in corporate profits—and exogenous factors, such as the threat from North Korea's nuclear plans. But from late 1990 until early this year, worried investors could take comfort that the Federal Reserve was solidly backing them with a monetary policy that was unambiguously bullish for stocks.

But now, when equity investors break out in a cold sweat, there's no warm, friendly Fed to reassure them. Since early February, the central bank has hiked short-term interest rates 1.25 percentage points in an attempt to cool down the economic expansion. That sent the Dow Jones industrial average plummeting from 3979 to 3593—nearly 10%—in just eight weeks. The Dow recovered to 3769 by June 6, but that hasn't quashed fears of yet another steep drop.

Now, equity investors' overriding concern is the Fed itself. The main debate on Wall Street these days is how effective the central bank will be in slowing the economy and heading off inflation before it becomes a problem.

RATE DEBATE. Has the Fed done enough tightening of monetary policy, or will it need to do more? Byron R. Wien, Morgan Stanley & Co.'s U.S. investment strategist thinks the stock—and bond—markets will have an upbeat second half, especially in the fourth quarter, because the Fed's braking action is working. "The economy is slowing," says Wien, "and interest rates will come down later this year." On the other hand, strategist David G. Shulman of Salomon Brothers Inc. and Jeffrey M. Applegate of CS First Boston contend that fed funds, at 4.25%, will have to go over 5% before the economy cools enough to satisfy the central bank. There could be trouble for stocks later in the year if the Fed boosts rates yet again.

The Fed debate may drag on for months. But it could be a huge mistake for investors to sit on the sidelines until it's resolved. Even Applegate, who expects more tightening, is counseling investors to buy. "Most of this year's declines came in six trading days," he says. "The rebound will happen the same way. If you stay too defensive now, you risk getting shut out later."

In fact, all the handwringing over the Fed's next move is obscuring the market's fundamental strengths and the reasons to stay with stocks:

■ Company profits are looking bright, and analysts are still raising their 1994 and 1995 forecasts, even in the face of higher interest rates. Zacks Investment Research says analysts are looking for a 16% gain in earnings for the Standard & Poor's 500-stock index this year and a 13% increase in 1995.

■ Corporations are generating plenty of cash. Kenneth S. Hackel of Systematic Financial Management, a Fort Lee (N.J.) money manager, says stocks are cheap when valued by free cash flow (net income plus depreciation, less preferred dividends and necessary expenditures). Hackel says the S&P stocks are selling for 23.5 times free cash flow, vs. the long-term average of 25. Compa use free cash flow to make acquisiti buy back shares, and pay dividends

■ Equity mutual funds are still get huge inflows from individual invest Inflows dropped in March, but Ap $11.3 billion was nearly as high a April, 1993. Fund watchers say Ma flows ran at early 1994 levels.

■ Sentiment—when measured by pol newsletter writers, investment advis and stock-index futures traders—is de edly bearish, which is a contrary ind tor and bullish for stocks. The reas that the market already has discou the bad news, so any favorable deve ments trigger a lot of buying.

Perhaps the best case for stock the behavior of the market itself. spite the spike in interest rates, Dow and the S&P stand where t started in January. At worst, the st fell 10% from their highs, as comp with the 17% plunge in long-term b and 20%-plus spills in many emerg markets. Don R. Hays, investment st egist at Wheat First Butcher Sin says the overdue correction—until year, there hadn't been a 10% sel since 1990—is done and has cleared deck for the next leg up. Says H

r the first time in two or three rs, I feel pretty good about the po- ial for the S&P 500."

n fact, some money managers are ing to big-cap stocks after several rs of playing in cyclicals or small-cap nid-caps. "Investors like the quality the liquidity of the big-cap stocks," s market analyst Laszlo Birinyi of Bi- i Associates. He notes that money gone into the big-cap stocks and ted away from the OTC companies.

Actually, there's good reason for moving back to the big S&P stocks. First, the index is home to lots of big consumer stocks that have languished for the past few years. Such companies as Disney, Johnson & Johnson, Merck, and Wal-Mart Stores are frequently mentioned. Roger Engemann & Associates' private accounts and Pasadena mutual funds, together worth $4.7 billion, are chock-full of such big consumer stocks. Engemann argues that the market will embrace these companies because the cyclicals' growth rate will decline.

What's more, these stocks are cheap. The large-cap growth stocks as a whole trade at about the same price-to-earnings ratio as the S&P, which means the premium price often attached to these stocks has disappeared. Lehman Brothers analyst Elaine M. Garzarelli says many growth-stock sectors, such as drugs, health care, and food companies, are attractive. She recently upgraded the S&P soft-drink stocks—namely Coca-Cola Co. and PepsiCo Inc.—because they trade at a p-e ratio only 5% higher than that of the S&P 500. Typically, Coke and Pepsi sell at p-e's 30% to 45% greater than the S&P. By her estimation, the soda stocks should perform 37% better than the S&P over the next 12 months.

ACTION

Buy large-cap growth stocks—especially companies with hefty sales in foreign markets

HERE'S THE BEEF. The shift to big consumer growth stocks also dovetails with an expected pickup in business overseas. "These companies' exposure to Europe is going to help," says George W. Jacobsen, chief investment officer of Trevor Stewart Burton & Jacobsen, a New York investment manager. Among his choices are Gillette, Hasbro, Kimberly-Clark, Mattel, and McDonald's. Jacobsen also is bullish on two advertising agencies, both with substantial non-U. S. revenues: Interpublic Group of Cos. and Omnicom Group Inc.

Of course, there are still some opportunities outside the large-cap growth stocks. Richard S. Huson of the Crabbe Huson Group, a pension and mutual fund manager, thinks IBP Inc., the giant beef processor, has little downside and potential for big gains. IBP has a large cost advantage over its competitors. Coupled with lower cattle prices, IBP has a recipe for plump profits. "It's not affected by the economic cycle," says Huson. "It's in a cycle all its own that is now favorable."

Even investors who believe the economy will slow may want to use energy stocks to hedge against higher oil prices. Among the favorites are Amerada Hess, Atlantic Richfield, Occidental Petroleum, and Sun. W. Anthony Hitschler, president of Brandywine Asset Management, says Amerada Hess is especially attractive because it's benefiting from a large capital-spending program. Analyst James F. Clark of CS First Boston estimates that each $1-per-barrel hike in oil brings about 53¢ to Amerada's bottom line.

For contrarian-minded investors, some of the best buys are big investment banks, such as Bear Stearns, Merrill Lynch, and Morgan Stanley. James H. Gipson, president of Pacific Financial Research, says these big brokers sell for a mere 30% to 40% premium over the value of their securities inventories, a bargain price. "The cheapest thing on Wall Street is Wall Street itself," says Gipson. For sure, if the crowd is so negative about Wall Street itself, better times and higher prices can't be far away.

By Jeffrey M. Laderman in New York

STOCKS THAT SHOULD THRIVE IN A JITTERY MARKET

	Stock price*	P-E ratio**	Dividend yield
MERADA HESS	49	43.0	1.2%
oming off a period of losses, the p-e is high. But this oil company a smart investment for those who think oil prices are going up.			
T&T	55½	16.9	2.4
ight to quality is spurring interest in the premier telecommunica- ons company. Will be major player in global info network.			
ITICORP	40	7.6	1.5
espite higher interest rates, bank stocks are strong. Citi should rofit as foreign economies pick up.			
IP	26	12.9	0.8
iant beef processor has lowest overhead in industry. Larger herds ould keep cattle prices down, profits up.			
JOHNSON & JOHNSON	42¾	14.1	2.7%
Health-care stocks are starting to look better, and this giant is showing up on many buy lists.			
MORGAN STANLEY	60¼	7.5	2.0
Earnings may have peaked, but this blue-chip investment bank sells at not much more than the value of its securities inventory.			
OMNICOM	46¾	15.5	2.7
As they fight for sales, companies will step up advertising expenditures. That's bullish for advertising agencies such as this one.			
WAL-MART STORES	23¾	19.5	0.7
Onetime stock market darling sells near three-year low, yet new stores in Canada and Mexico should keep profits rolling in.			

INE 6, 1994 ** BASED ON 1994 ESTIMATES

DATA: BW INTERVIEWS WITH MONEY MANAGERS AND ANALYSTS, ZACKS INVESTMENT RESEARCH, BLOOMBERG FINANCIAL MARKETS

d R E A M

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Frowning.

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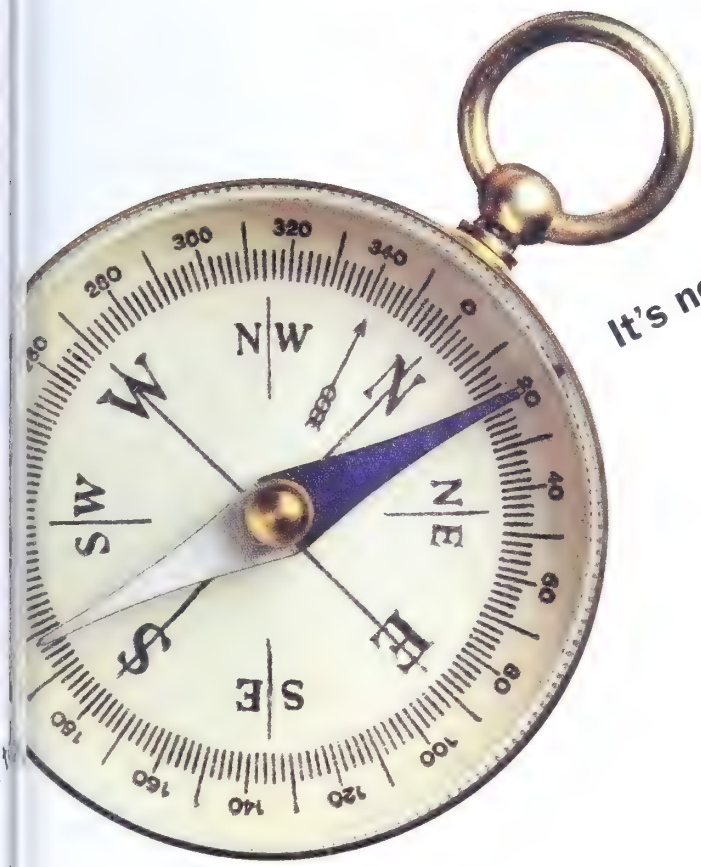

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EDS

IT MAY NOT BE TAPS FOR SMALL CAPS

Secondary stocks have lapsed into a heavy snooze—but they still show signs of life

WHERE TO INVEST

For fans of small-cap stocks, who had counted on seeing those little devils continue to beat the market, 1994 is not going according to plan. Secondary stocks have joined their larger brethren in a seesaw move that has brought them back to just below where they started at the beginning of the year (chart). It seems that the resurgence in small-cap stocks is grinding to a halt.

Or is it? In fact, the small caps are probably hesitating, not conking out. Valuation levels remain reasonable—secondary stocks are trading at a historically favorable 25% premium to the price-earnings ratio of the Standard & Poor's 500-stock index. And although some sectors are likely to come in for continued potshots, as evidenced by the troubles that have beset once high-flying sectors such as health care and casinos, the economic winds are actually blowing the small caps forward. John W. Ballen, who runs small-cap portfolios for Massachusetts Financial Services, observes that "even though earnings growth in the S&P 500 may be difficult to come by, because of margin squeezes and resistance to raising prices, companies with high unit growth will be rewarded." And to him, that argues in favor of the small-cap sector.

HOTBEDS OF HYPE. There is another argument for small-cap stocks, at least according to portfolio managers like Ballen: They are not performing quite as poorly as they often do during times of market setbacks. The whipsawing volatility of previous corrections simply isn't there for the most part, even though money-flow statistics show a steady stream of investment funds out of over-the-counter stocks into the components of the S&P 500.

The market's blasé attitude toward secondaries may be a reflection of the sentiment among small-cap stock pickers, who tend to be "bottoms-up" types who hunt companies on the basis of fundamental factors, pretty much ignoring Street sentiment. "We agree with Warren Buffett—long-term investing is his style too," says Lee Kopp, whose Kopp Investment Advisors money management firm runs $1 billion in small- and mid-cap portfolios. That's a pretty typical, if self-serving, sentiment among professional small-cap investors, most of whom have seen their holdings flat or down in the year to date.

If there is danger in the small-cap arena, it resides among the hotbeds of hype. Among them are cold-caller favorites such as recent initial public offerings and fads such as restaurant chains and casinos—though gambling companies have been so battered that they may be a good buy now. The best approach to small caps—which play to their major advantage over large stocks—is to focus on the many small companies that are not widely followed by brokerage-house analysts. They are not necessarily obscure companies. Marina Carlson, co-manager of the Strong Common Stock and Opportunity mutual funds, counts among her favorites Libbey Inc., a glassware company with a well-known name in Middle America. "It's a very cheap stock, selling at just 10 times projected 1994 earnings," Carlson notes.

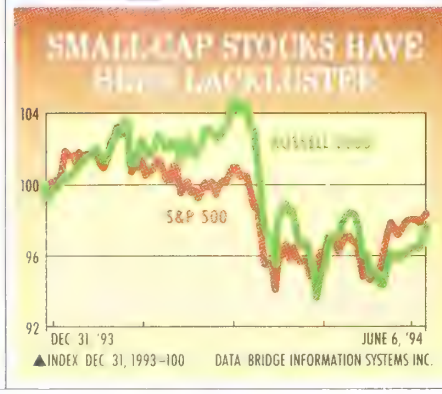
NICHE BY NICHE. Another area where opportunities abound is health care. Kopp is cherry-picking smaller companies such as Haven Corp., a leading national nursing home chain, while avoiding ethical drug makers and health-maintenance organizations that are becoming, he feels, a bit pricey. At the Delaware mutual fund group, small-cap portfolio manager Edward Antoian is also looking for niches within health care. Health care for women, for example, is the focus of companies such as Columbia Laboratories, Noven Pharmaceuticals, and Etic Holdings.

ACTIO

With "ni investing' rage, t health-car home-sec compan

With "niche investing" all the a among small-cap buyers, that mu concentrating on sectors that are li known to most investors. Home-sec companies, for example, are a po tially high-growth area that Antoi pursuing. Fear of crime, he note giving a boost to such residential-s ity outfits as Pittston Services, and Multimedia. That's small solac anyone who has been burglarized la But finding silver linings in clou what small-cap investing is all a nowadays.

By Gary Weiss in New



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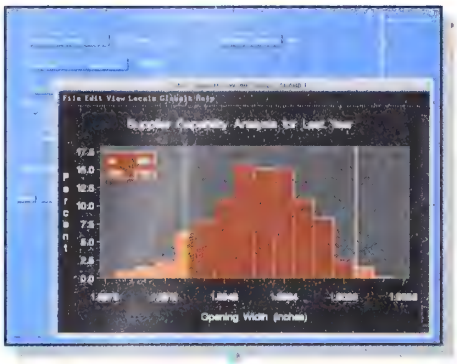

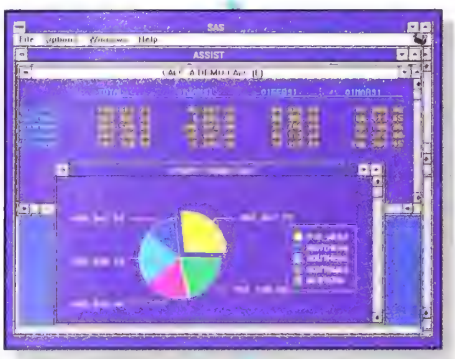

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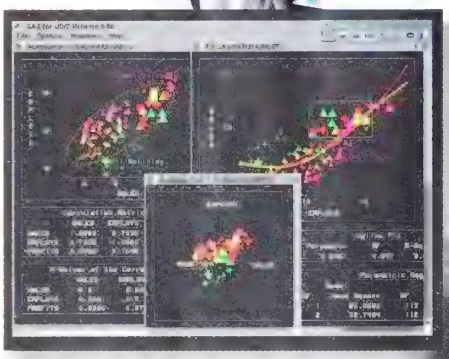

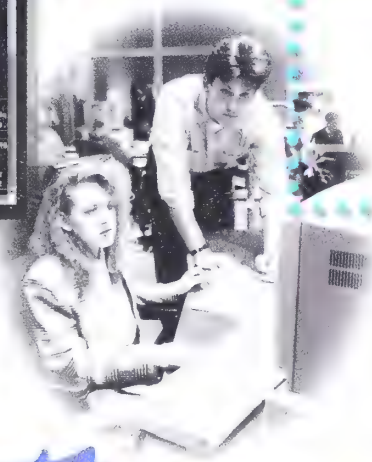

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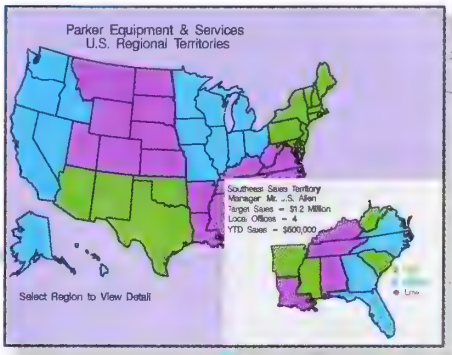

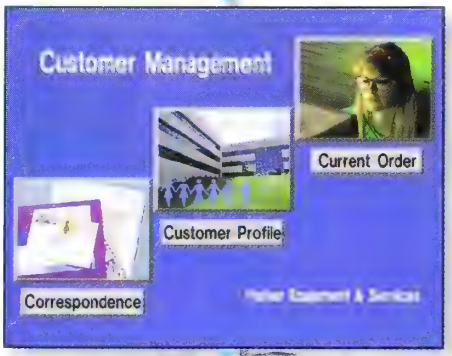

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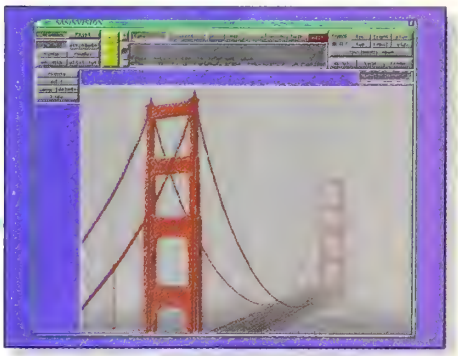

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FOUR PROS MAKE THEIR PICKS —AND TWO TAKE THEIR LUMPS

Today's market proves a tough challenge to contestants in our annual stock-picking tourney

WHERE TO INVEST

Finding a red-hot stock in today's market is not easy. But Joe Scott-Plummer, an investment manager from Scotland, did just that. He identified a Peruvian telephone company whose shares are up a stellar 77.6% so far this year. None of his other stock picks worked nearly as well, but the Peruvian investment puts Plummer at the head of the pack of four investment pros participating in BUSINESS WEEK's annual stock-picking contest. Last December, we asked four experts to invest a hypothetical $10,000 in each of 10 stocks. At midyear, Plummer's portfolio of foreign stocks is up 5.7%. His picks are beating the Standard & Poor's 500-stock index, which has fallen 1.5% over the same period.

The other three investors focused their investments on U. S. stocks and bought near the peak of the market, which began slumping in February. All the portfolios lost money, although one stayed a hair ahead of the S&P. But the remaining two turned in abysmal performances—double-digit negative returns, largely due to their positions in the hard-hit technology and biotech sectors.

SAVVY MOVE. Runner-up is Peter C. Bennett, chief investment officer of State Street Research & Management Co. in Boston. He correctly picked two technology stocks that were big winners, but they weren't enough to offset the effect of one stock—IDB Communications—which crashed on June 1. He finished down 1.3%. Small-stock specialist Elizabeth B. Dater, who runs the Emerging Growth Fund at Warburg Pincus Counsellors Inc., chose a portfolio of stocks that is down 12.2%, chiefly because of bum investments in high-tech companies and a biotech firm. Technology specialist Michael Murphy, editor of the *Overpriced Stocks* newsletter and *California Technology Stock Letter*, was down 16.3%. His loss was mitigated by a savvy decision to sell one stock, Waterhouse Investor Services Inc., short, a move that produced a 41.6% gain.

All the investors are optimistic that at least some of their stocks will bounce back in the second half. They each took advantage of the opportunity BUSINESS WEEK allows in this contest to sell one stock and buy something else.

Plummer, who is chief investment officer for Martin Currie Investment Management Ltd. in Edinburgh, describes himself as a "growth manager with value" who invests primarily in emerging markets. Compañía Peruana de Teléfonos, his best pick, behaved more like a highflier, gaining 77.6% after considering the effect of exchange rates. The company is an example of "what can happen to telecommunication stocks when people take steps to move into the mod world," says Plummer. CPT remains top pick for the next six months.

To bolster his portfolio for the ond half, Plummer wants to sell on his losers: Hongkong Shanghai Bank Corp., down 10.3%. He wants to bu stock on the Thailand Exchange, Ba kok Bank Public Co., which is tradin $8.40 a share in U. S. dollars, and w Plummer says will have loan growt 18% to 20% a year.

Bennett would have beaten the handily had it not been for one unfo nate investment. On June 1, share IDB Communications tanked by 57% a the company disclosed a dispute its accountant. IDB's shares have re ered somewhat but are still down since Bennett bought them.

The rest of Bennett's portfolio cludes two big winners: Millipore C a biotech and semiconductor indu supplier recovering from tough ti is up 49.7%. And Sybase Inc., a hot

HOW THEY FARED

	JOE SCOTT-PLUMMER	PETER C. BENNETT	ELIZABETH B. DATER	MICHAEL MURPHY
PERCENT CHANGE DEC. 13, 1993 TO JUNE 6, 1994	UP 5.7%	DOWN −1.3%	DOWN −12.2%	DOWN −16.3%
BIGGEST WINNER	CO. PERUANA DE TELEFONOS 77.6%	MILLIPORE 49.7%	METHODE ELECTRONICS 22.0%	WATERHOUSE INVESTOR SVCS. 41.6% (SHORT)
BIGGEST LOSER	AOYAMA TRADING −46.5%	IDB COMMUNICATIONS −47.0%	GENSIA PHARMACEUTICALS −47.0%	WEITEK −52.9%
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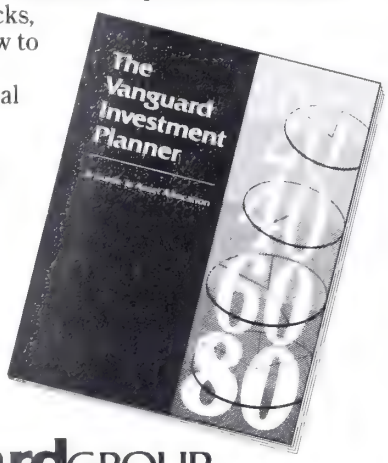

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The Pros

ware concern, is up 40.9%. Bennett less enthusiastic about his other s ware pick, Cisco Systems Inc., whic down 16.5%. He wants to sell Cisco buy Chubb Corp., which he sees as b efiting from higher premiums.

Dater's diversified portfolio was signed with an economic recovery mind. She was right on the econo but even so, most of the losers in portfolio lost big. Her biggest loser: C sia Pharmaceuticals, down 47% in t dem with the rest of the biotech s tor. Meanwhile, her best perform Methode Electronics, was up just 22

For her midyear switch, Dater wa to dump Auspex Systems Inc. and Commerce Clearing House Inc. S thinks new management at Commerc publisher of tax information for corp tions, will produce annual earni growth of 20% to 25%.

Murphy's experience clearly sh the risks in narrowly concentrated p folios. All but two of his stocks are technology and biotech, and all but of those are down at least 9%.

UPSIDE SURPRISE? Murphy sold stocks short and came out with a gai 13.9% on those picks. Waterhouse sha dropped, but Wells Fargo & Co. sha rose, producing a loss of 27.8%. Murp who always covers short positions w his loss reaches 25%, wants to aban Wells Fargo and use the proceeds sell another stock short: Micron Tech ogy Inc. The company makes compu chips called DRAMs (dynamic random cess memories) used in PCs. Mur thinks DRAM prices are headed d and that Micron's shares will follow.

The three U. S.-based stock pros e have varying degrees of pessim about the outlook for the stock mar for the second half. Bennett is concer about the prospect of interest rate creases, and he worries about spec tive investing by hedge funds. He thi the Dow Jones industrial average c fall 5% or 10% by the end of the y Dater expects a flat to down mar until the fourth quarter, when she's l ing for an upside surprise "as inves realize we're not in a hyperinflation market," she says. Murphy is the m bearish, citing concerns about ris rates and the weak dollar. Plumm favorite stocks remain those in emerg markets. He thinks many of those m kets may recover in the second half cause the fundamental prospects most of these stocks have not chang

As the pros' mixed performance s gests, there are home runs to be fou But a narrow focus on a few indust can prove disappointing—and costly.

By Geoffrey Smith in Bo

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SURF'S UP ABROAD

Analysts agree that the growth wave to ride is in recovering Japan and Europe

WHERE TO INVEST

Jim O'Neill is trying hard to keep his composure. The head of global research at Swiss Bank Corp. in London, O'Neill last year spotted signs of surprisingly strong corporate profits despite the Continent's worst recession in decades. So what did it get him? Exasperation. European stocks, hit by inflation worries and dimming hopes for new Bund-esbank interest-rate cuts anytime soon, followed the U. S. bond market south, tumbling 8% since Dec. 31. "The biggest dilemma hitting markets this year," says O'Neill, "is that we've got economic growth."

But that's hardly the case in Japan, where the Nikkei stock average has risen 19% this year amid signs of an economic turnaround and hopes that record-low short-term interest rates will fall even further. In fact, investors in Japan may be leading a worldwide trend. Despite Europe's recent jitters, evidence is growing that a low-inflation recovery is taking root across the industrial world. Better yet, the recovery could propel corporate earnings sharply higher as restructuring campaigns around the world pay off. In Europe, the phenomenon of the corporate shakeup has a way to run. And in Japan, many companies are still in the early stages of making themselves over.

Indeed, hopes for a big jump in Japanese profits—along with Washington's decision to stop talking the dollar down—has carried the Nikkei stock average to around 21,000 this spring. And Goldman Sachs (Japan) Co. strategist Kathy Matsui sees a discount rate cut between July and September sparking the market to 23,500 by next year.

Maintaining that the Japanese "are restructuring their way out" of recession, she is also banking on heavy-duty cost-cutting generating big profits from even modest sales increases. A big drop in depreciation expenses left over from the capital-spending boom of the 1980s will help, too. For these reasons, Rod Smyth, strategist for Baring Securities (Japan) Ltd., f ures major manufacturers' profits v be up 40% this year, although sa may rise only 1.1%. Smyth is reco mending Komatsu Seiren, a maker printed fabrics, plus exporters So Sanyo Electric, and Hitachi, in antici tion of rising consumer demand home and abroad. But Matsui fav cyclical issues, including steelmak NKK, Yodogawa Steel Works, and Ai Steel Works. Cyclicals also beckon

STOCK PLAYS FOR A WORLD RECOVERY

Company	Price per share (dollars)
CYCLICALS	
MANNESMANN GERMANY Its mobile-phone unit is a big plus	$267
SEKISUI CHEMICAL JAPAN Making a bundle selling pre-fab homes	$10
CONSUMERS	
SEED JAPAN Discounts contact lenses and eyeglasses	$10
BOLS WESSANEN NETHERLANDS Brewing & dairy group mixes booze and moos	$21
RESOURCES	
ELF-AQUITAINE FRANCE World's cheapest big oil stock	$36
DURBAN ROODEPORT SOUTH AFRICA Low-cost reserves if you think gold will boom	$13

DATA: BUSINESS WEEK SURVEY OF FUND MANAGERS AND ANALYSTS

*American depositary receipt

ACTION

Look at Japan's steelmakers and exporters and Europe's natural-resource stocks

g Nelson, head of man-nent at Jardine Fleming rities Ltd., who has moving cash into poly-r maker Teijin Ltd.

a time of wrenching po-l and economic change in n, it's not surprising that ssel of less traditional ks are making their way the pros' portfolios. nas Norton, a New York-d specialist in Japanese over-the-ter issues, is focusing on companies have figured out ways to skirt n's high-priced distribution system ap what he calls the "silent revolu-' of Japanese consumerism.

HE BAG? Contact lens maker Seed, example, has spawned a thriving lesale business in eyeglasses that for 65% off retail. He also likes kkoh Fund, a finance company that s under the radar of the banks" to h small-business borrowers. The pany's earnings have quadrupled e 1989, and Norton sees them rising in '94.

Japan's recovery looks increasingly it's in the bag, Europe is still trying igure out when good news on the orate front will translate into a clear ard market move. What could help k such a move is some action by German central bank. Usually rock-dy in its pursuit of sound money, Bundesbank has issued a babble of licting statements lately as a surge ioney growth has given rise to new tionary expectations. Amid the con-n, investors have come to believe have seen the Buba's last interest-cut for a while.

ut the Buba could yet give markets easant surprise. Andrew Williams, -president at Philadelphia's Glen-le Trust Co., figures that a weaker . dollar later this year will provide Bundesbank added leeway to re-e lowering rates. That will help eco-ic growth and profits, to be sure. s obvious, however, is the impact enormous cost-cutting is having on orate bottom lines. "The earnings ompanies with cyclical leverage are being underappreciated," figures rill Lynch & Co. European strategist hael Young, who recommends Finnish el-engine maker Metra Corp. and als producer Outokumpu. Morgan ley & Co. analyst Chris Moore likes ian auto maker Fiat, which could be k to breakeven this year after a $1 on loss in 1993. By 1995, estimates re, Fiat could be earning $1.06 per erican depositary receipt. And Swiss k's O'Neill recommends German mical maker Hoechst, France's tele-munications giant Alcatel Alsthom, and Swiss construction giant Holderbank Financière Glaris.

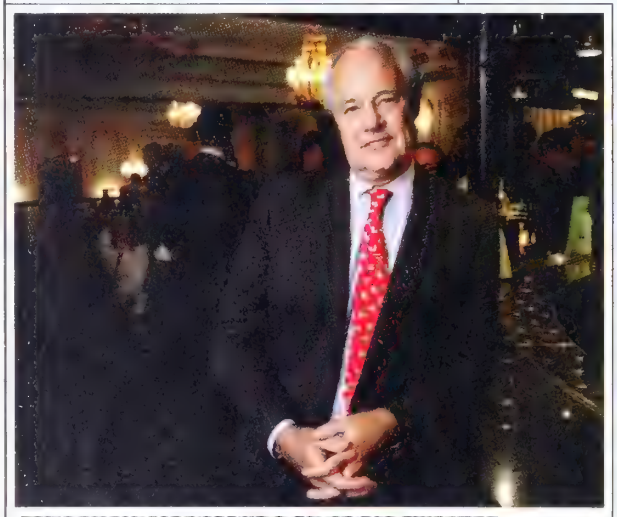
Even as they invest for a low-inflation growth cycle, some pros are hedging their bets a bit. They are going into natural-resource stocks, just in case the firming world economy starts to nudge prices up. One favorite of many analysts is Britain's RTZ Corp., a pure play on copper prices. BT Securities analyst Warren Toft in Sydney is buying Broken Hill Proprietary Co., a big Australian producer of copper, steel, and energy. And Glenmede's Williams gravitates to France's Elf Aquitaine. Cost-cutting and a spin-off of state-owned shares should boost Elf's efficiency and investor payback, he says. With its shares trading at 4.5 times cash flow, vs. 6 for competitors, "it's the cheapest major oil company in the world."

That's the allure of global equities right now. Despite a growing appreciation of the two Rs—recovery and restructuring—many stocks overseas are still within reach. On many bourses, pleasant surprises could become routine as the global rebound gathers speed.

By Bill Javetski in Paris and Larry Holyoke in Tokyo, with William Glasgall in New York

A SKIER WITH A TASTE FOR CROSS-COUNTRY INVESTING

It's cocktail hour in London, and Denver money manager Bruce B. Bee is bellying up to the bar at a pub near Liverpool Station. But this is not entirely recreation. The pub is part of the fast-growing JD Wetherspoon PLC chain, and Bee has stopped off to chat with the CEO and get a taste of what the company's up to. At $5.66 a share and a price-earnings ratio of 20, Bee concedes, Wetherspoon is rather expensive. But "it's one of the few interesting specialty-restaurant and bar plays in Britain."



BEE'S SMALL-CAPS ARE UP 8.5% SO FAR THIS YEAR

Small-cap companies such as Wetherspoon are Bee's bread and butter. Bee, a 53-year-old former venture capitalist, and partner Edward N. McMillan, 46, once chief of First Boston Asset Management Corp., ferret out overlooked equities for wealthy individuals—and for institutions, including the Baseball Hall of Fame. Clients have entrusted Bee & Associates Inc. with about $100 million, and Bee's small stocks have produced big winnings. For the five years ended Mar. 31, Bee earned investors an average of 20.1% annually, nearly three times the return of the Standard & Poor's 500-stock index. So far this year, Bee is up 8.5%.

SWISS FAVORITE. One reason: Disillusioned by the high prices of small companies in the U.S., Bee in recent months has moved 85% of his assets from the U.S. to Europe, Asia, and Latin America in search of better values. A large share of that has gone into Scandinavia. One favorite is Skåne-Gripen, a Swedish building-materials maker that sells much of its output in Germany and sports a p-e of only 9. He also likes Benefon, which trades in Helsinki. Benefon has built up a tidy trade in analog cellular-phone gear and is going digital. Its profits may be up 30% in 1994, but its p-e is only 7.

Skis Rossignol, the French ski maker, is another holding. Bee says it "opened up tremendous opportunities" by shifting production from France to Italy and Spain to cut labor costs. And since Bee is an avid skier, it's no surprise that he owns the stock. For Bee, business and pleasure can often mix to produce a profitable outcome.

By William Glasgall in New York

GRAHAM TROTT KATZ PICTURES

OPPORTUNITIES AMID THE CARNAGE

Many bourses have been hard hit, but they still merit more than a passing look

This has been a cruel year for investors on many emerging-market bourses. After a stupendous 1993, in which five markets more than doubled, much of the sizzle has suddenly disappeared. With U. S. interest-rate hikes, a global bond-market shakeout, and increasing political tensions rattling even the bravest of investors, many emerging markets have gone into a funk (table).

LITTLE TO CHEER ABOUT ON EMERGING MARKETS

	1994 percent change*
CHILE	29.8%
BRAZIL	25.8
INDIA	22.5
SOUTH AFRICA	10.7
ARGENTINA	5.6
PHILIPPINES	–4.0
SINGAPORE	–6.7
MEXICO	–10.7
THAILAND	–18.0
INDONESIA	–19.8
HONG KONG	–21.1
CHINA	–56.1
TURKEY	–63.2

*In dollars, through June 6 DATA: BLOOMBERG FINANCIAL MARKETS

The carnage has been virtually indiscriminate. Teléfonos de México, a bellwether among emerging-markets equities, has skidded 20% since January. So has Thai Fund, which invests in one of Asia's hottest economies. Other issues are down 35% or more. "We're sitting on a pile of cash," says J. Mark Mobius, manager of the Templeton Developing Markets Trust, who has 30% of his $5 billion portfolio in liquid assets. "We refuse to throw it at the market."

VIOLENCE. Yet Mobius is hardly abandoning emerging markets altogether. Indeed, he and other pros say they are still buying—if cautiously. Amid the wreckage of 1994, they insist that there are several hard-hit bourses that merit more than a passing look.

Take Mexico. A rural revolt, kidnappings, and the assassination of ruling-party presidential candidate Luis Donaldo Colosio have helped push the stock market down 11% in 1994. And rising interest rates and foreign exchange losses are eroding corporate earnings. What to do? "Take advantage of this," advises Tamzin Hobday, chief Latin American analyst at Baring Securities Inc. "Buy blue chips."

She and other stock-pickers reason that Mexico's economy will recover from last year's recession as the North American Free Trade Agreement starts to work. And analysts are betting that Colosio's successor, Ernesto Zedillo, will keep the Institutional Revolutionary Party (PRI) in power for six more years. Analyst James M. Bogin of San Francisco's GT Capital Management argues that well-established companies such as Telmex should benefit from improved political stability if the PRI can make good on its pledge for a fraud-free election. But Stefano Natella of CS First Boston prefers Grupo Financiero Banamex-Accival (Banacci), a banking group now on the rebound from a sluggish 1993. And among Hobday's favorites is Soriana, a supermarket chain whose profits may rise 18% this year.

Brazil may also be overcoming its political turmoil. Investors have been on edge because of a presidential campaign pitting the pro-business former Finance Minister, Fernando Enrique Cardoso, against the front-running fiery socialist candidate, Luiz Inacio Lula da Silva. But the São Paulo market—and Cardoso's hopes—have been buoyed by Brazil's decision to circulate a new currency, the real—a plan Cardoso crafted as Finance Minister. The real will be tied to the dollar. That may cool Brazil's 45% a month inflation and give a lift to such consumer issues as cigarette maker Souza Cruz and appliance maker Brasmotor.

Political tensions are abating in South Africa, where investors have begun returning after years of boycotting apartheid. James U. Blanchard III, a New Orleans-based gold mutual-fund operator, thinks the best way to profit from the country's political and economic transformation—as well as any increase in bullion prices—is through such choice mining issues as Randgold & Exploration and Durban Roodepoort Deep. "You can buy gold in the ground for $20 an ounce," he says, "compared with over $250 in the U. S."

BOOMS. But Templeton's Mobius prefers to invest where he lives, in Hong Kong. Badly bruised earlier this year, the market has recovered 12% since May, and Mobius has been putting some of his cash back into local blue chips. With President Clinton extending Beijing's most-favored-nation trading status, "the bad news is pretty much out," Mobius says. Come 1997, when Beijing is due to take over Hong Kong, "this could become the greatest boomtown on earth."

Booms and busts. On many emerging markets, that's the order of the day. If you're a long-term investor with a taste for risk, the stragglers of 1994 haven't produced disappointments as much as they have created new opportunities.

By William Glasgall in New York

ACTIO

Brazilian c
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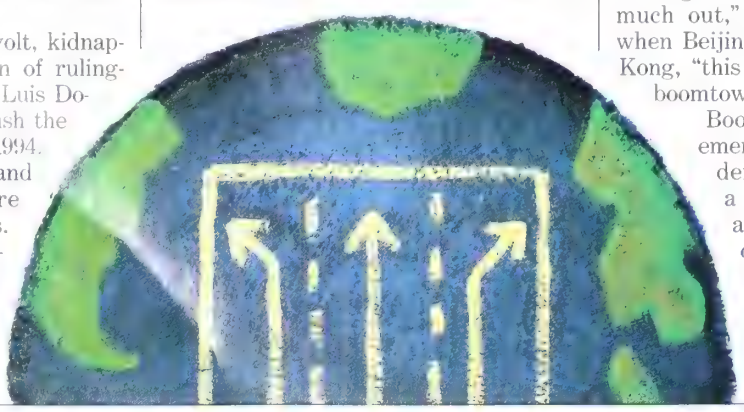
attractive p



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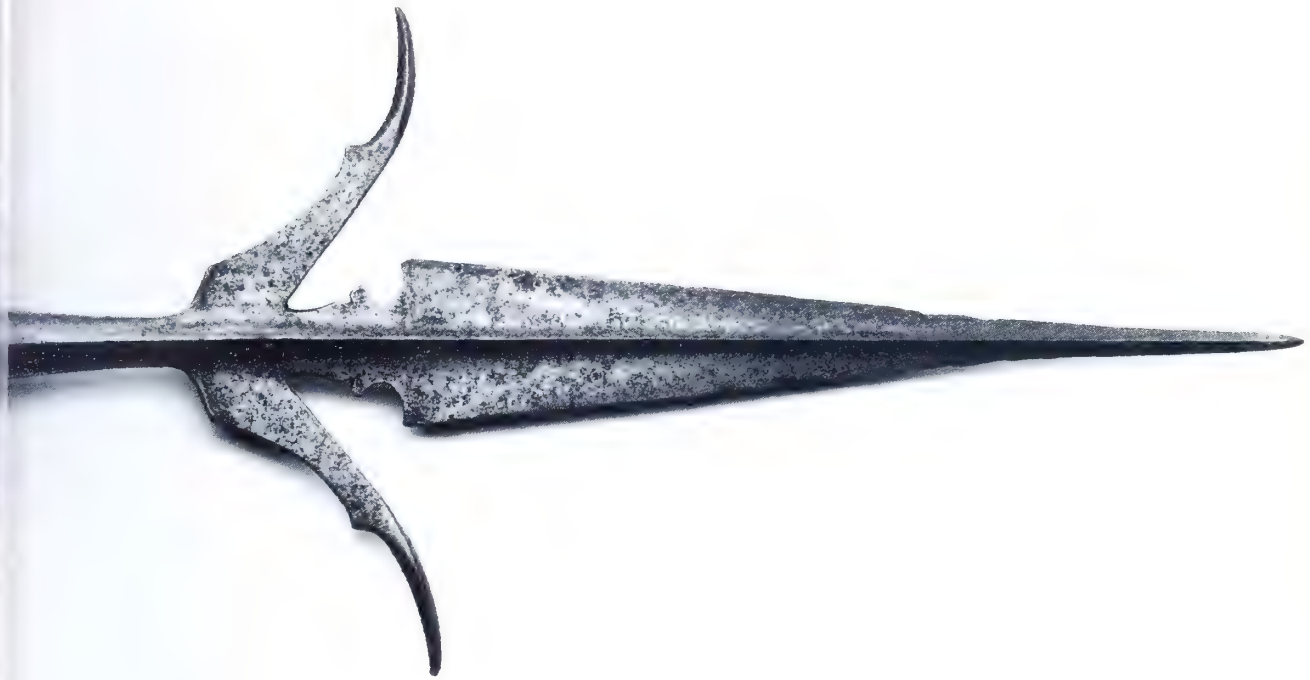

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METAPHOR

SHOULD ERRATIC RATES SCARE YOU AWAY FROM BONDS?

No, say most experts. They recommend caution while pointing out opportunities

WHERE TO INVEST

After taking a terrible pounding over the past several months, bond investors are understandably hesitant to venture into still-turbulent waters. Most economists feel the water is relatively safe: Inflation seems tamed for now, and the Fed is unlikely to further ratchet up rates any time soon. But a vociferous minority, particularly in the financial community, thinks that the respite will, at best, be brief.

Even the bond bears agree, though, that investors ought to be able to find good yields with relative safety, especially in municipals, junk, "split-rated" corporates, and some foreign issues.

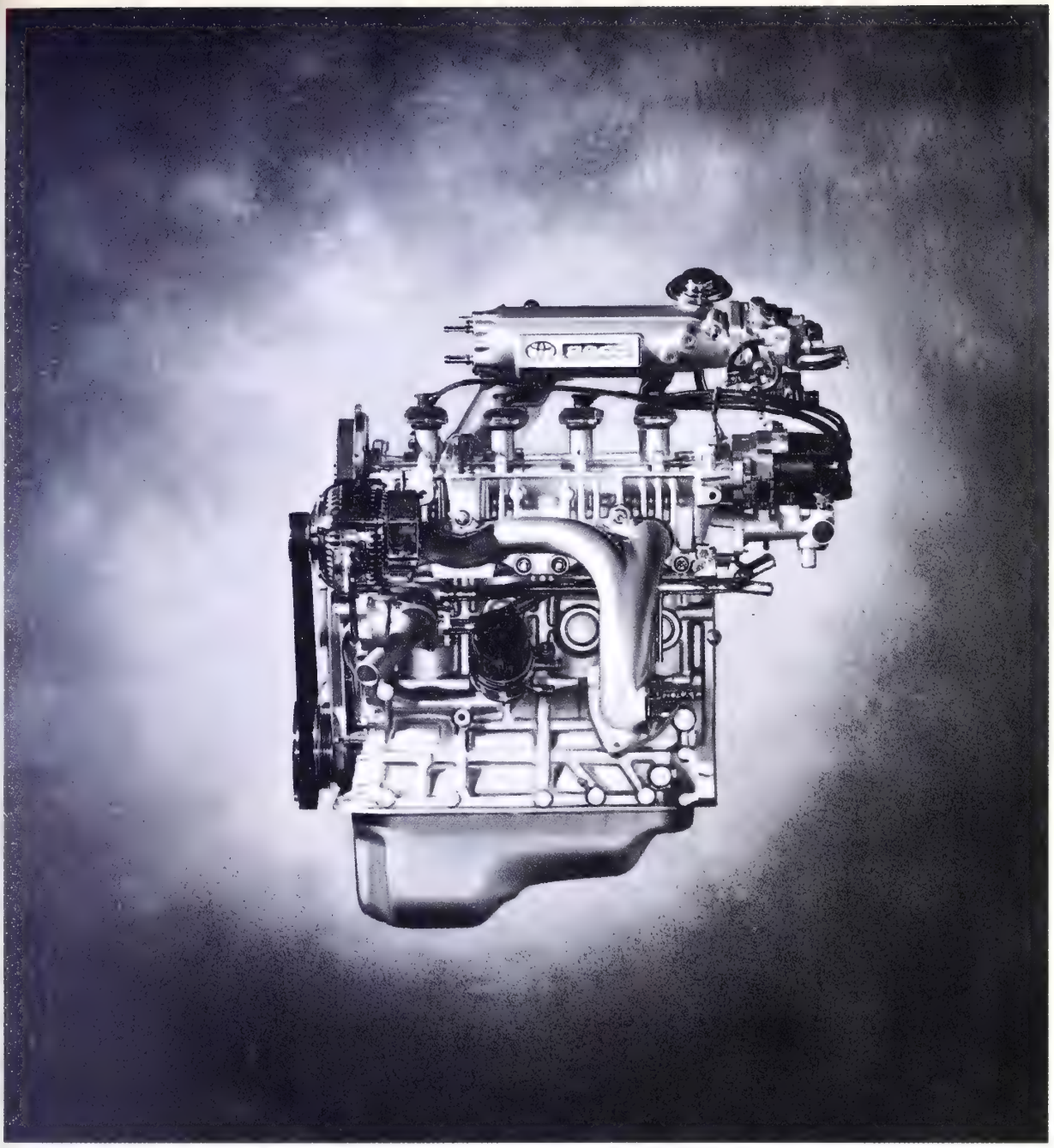
A PLUNGE. Many fixed-income specialists, citing the relative shortage of municipals, recommend buying tax-exempts, which they regard as one of the few values left in the market. For investors in tax brackets of 36% and higher, "munis represent an excellent value," insists James J. Cooner, head of Bank of New York's tax-exempt bond unit. He believes rates will stabilize at current levels and possibly even decline moderately by the end of the year. Adding to the attractiveness of munis is that 1994 demand will outstrip supply. This year, he says, volume of state and local issues will plunge to about $200 billion from $285 billion in 1993. One reason for this is that many local governments, like mortgage holders, moved to refinance their outstanding debt last year at historically low rates.

For an investor in a high tax bracket, he says, the aftertax yield on an A-rated muni is equivalent to a 10% return on a certificate of deposit or other taxable instrument. Because of transaction costs, Cooner advises investors who intend to buy less than $25,000 worth of a new issue at one time to consider instead a fund that includes issues of their home state, particularly if it's a high-tax state. For well-heeled investors who prefer individual issues, Cooner thinks utility revenue bonds are a good bet because they are usually issued by monopolies that provide essential services. On the other hand, he warns against hospital revenue bonds, even if they're A-rated, unless they're insured or backed by a Housing & Urban Development program. That's because of an excess of hospital rooms and the prospect of radical change in the health-care system.

But not every municipal-bond specialist shares Cooner's optimism. James L. Gammon, president of Lebenthal Asset Management, thinks munis are currently too expensive. "A lot of people have piled on to 7-to-10-year munis, and those have gotten particularly expensive," he says. Although supply is down from last year, he points out that after the [illegible] York and California legislatures [illegible] their budgets, large amounts of new[illegible] sues from those states will flood [illegible] market, making munis cheaper. T[illegible] he says, yields on municipals will [illegible] more than on taxables. And because [illegible] believes yields on 30-year Treas[illegible] bonds could shoot to 8.5% over the n[illegible] year, "at this moment, cash is the p[illegible] to be," he says.

There is more of a consensus on [illegible] er fixed-income investments. Portf[illegible] managers haven't lost their faith in j[illegible] bonds. While their enthusiasm has b[illegible] dampened by the seeming end to [illegible] rates, they point out that many junk[illegible] sues will likely benefit from stron[illegible] balance sheets as the economic recov[illegible] continues.

Few experts advise small indivi[illegible] investors to invest in single junk iss[illegible]



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but they're less cautious about "split-rated" corporate debt. These are issues that have earned the lowest investment-grade rating from one major rating agency and typically the highest junk rating from another. Because many institutional buyers are limited to issues with investment-grade ratings from both Standard & Poor's and Moody's Investors Service, these issues tend to sell at prices 40 to 70 basis points cheaper than investment-grade issues, says Daniel J. Fuss, head of fixed income at Loomis, Sayles & Co. The firm's top-rated bond fund holds a number of these issues, including USX, Westinghouse, and Time Warner.

GOOD BETS FOR A NERVOUS BOND MARKET

Bond	Coupon	Maturity	Yield-to-maturity	Rating
MUNIS				
ONONDAGA COUNTY	5.4	Apr., 2001	5.10%	AA
Solid credit, good for highly taxed New York investors				
PUERTO RICO COMMONWEALTH	7¾	July, 2000	5.05	AAA
High quality, triple tax exempt, good absolute and relative value				
CORPORATES (SPLIT RATED)				
USX	9⅜	Aug., 2003	8.75	Ba2/BB+
Attractive spread, improving credit, and candidate for upgrade				
TIME WARNER	9.15	Feb., 2023	9.79	Ba1/BBB-
Improving credit, available at a deep discount				
FOREIGN BONDS				
CEMEX	8⅞	June, 1998	9.30	Ba2/BBB-
A play on Mexico, lot of downside risk already gone, near investment-grade				
ARGENTINA FRB*	LIBOR +1⅜	Mar., 2005	12.52	NR
Speculative play on battered emerging market but reduced market risk because tied to short-term rates				
PROVINCE OF QUEBEC	7⅛	Feb., 2024	8.53	A1/A+
Cheap because of nervousness about upcoming Quebec elections				

*Floating-rate bond

DATA: NEUBERGER & BERMAN; LOOMIS, SAYLES & CO.

Global bond prices have dropped dramatically from the highs of last fall, but finding good values now requires much more than a dart board. Among the pros, there's something less than total consensus on the interest-rate outlook in overseas markets. Earlier this year, many money managers thought European bonds would outperform Treasuries. Now, says Tokai Bank Ltd.'s chief economist Robert T. McGee: "You're seeing faster growth in the German economy and comments from Bundesbank officials that downward movement in rates is coming to an end." Referring to Japanese bonds, Fuss says: "The yields are low and the currency is weak. That's a bad combination." But Leslie J. Nanberg, chief fixed-income officer at Massachusetts Financial Services Co. (MFS), thinks there is still room for rate drops in Europe and Japan. With interest rates one to two percentage points higher than in the U. S., "there's real value in those markets going forward."

Theresa A. Havell, director of fixed income at Neuberger & Berman, likes the debt of Australia, Denmark, and Canada. And Fuss has made a substantial bet on the Canadian dollar with heavy purchases of long-maturity Canadian debt. Province of Quebec issues denominated in U. S. dollars are a favorite, Fuss says, because of "abnormally wide" spreads over U. S. securities. These issues, he says, are especially cheap because of what he believes are excessive concerns that Quebec will vote, in upcoming elections, to separate from Canada.

TREAD WITH CARE. Even though there has been a massive sell-off in emerging markets, fixed-income experts are treading carefully. For the most part, they still believe in Mexico and Argentina. Although the long-anticipated upgrade in Mexican debt has not yet happened, portfolio managers remain confident that Mexico will soon achieve its deserved investment-grade status. Argentina, they say, will not be far behind.

MFS's Nanberg says the mutual-fund company is "starting to look at Brady bonds," including Mexico and Argentina. But, he says, "if you're concerned that interest rates are going a lot higher, you probably would not want to be involved with them" — except as a diversification measure.

And with residential mortgage refinancings, and therefore prepayments, slowing to a trickle, some pros now think they've seen light at the end of the tunnel of the mortgage-bac securities market. C rates level off and v tility abates, says ven Vielhaber, dire of fixed income at Capital Managem these instruments "mi start to look attrac again."

Not all fixed-inc specialists see value today's markets. bears argue for a m more defensive post Paul D. Mastroddi, economist at J. P. M gan & Co., sees gr domestic product gr ing at a 5% annual U. S. auto makers o ating at full capac and unemployment ing. Mastroddi belie that the Fed will forced to push up ra to a level that will k the economy from gr ing any faster than to 2½%. By yearend, Morgan exp the federal funds rate to reach 5.5% the 30-year Treasury 7.75%. "I woul recommend anyone putting new cash the bond markets," says Mastroddi.

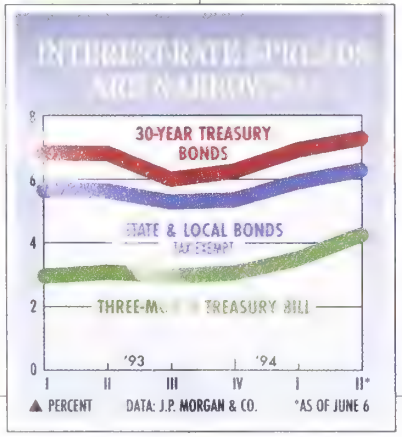
McGee of Tokai Bank, whose ea January forecast of a 6.9% long-b yield by March 31 put him closer to the mark than most of his peers, generally agrees: "The summer should be good for the bond market. But about the time people get relaxed in the fall, it's going to be rough sledding." He thinks investors in search of safety who don't need their funds immediately should consider buy Treasury notes maturing in two to years. That way, he says, they will b efit from "pretty good" real returns and higher yields later as they reinv maturing notes.

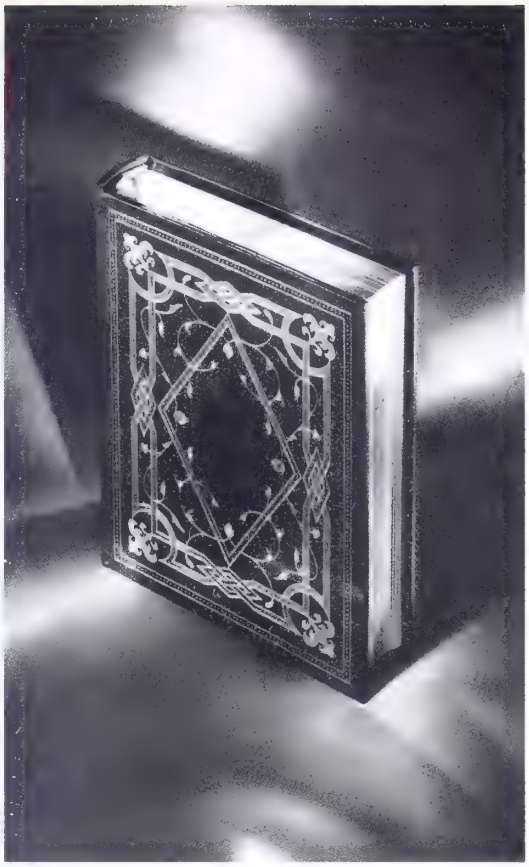
ACTIO

Investor should be a to find go yields amo munis, jun and split-ra corporat

These tones of caution seem pervas these days among bond mavens. Giv the carnage they've been through late, it's hard to blame them. But market has fallen enough so that risk-reward ratio now favors invest seeking to make sophisticated b plays.

By Phillip L. Zweig in New Y





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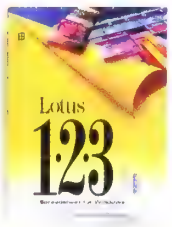

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TREMORS IN THE FIRST HALF MAY UNCOVER A FEW NUGGETS

True, many mutual funds got pummeled—but they may be better values now

Mutual-fund investors found few places to hide in 1994's first half. K.O.'d by interest-rate hikes, the bond market was a disaster. The stock market wasn't much of a contender, either, falling 10% in an eight-week period. But there may be a silver lining: Many battered funds are far better values now. And savvy investors can still find funds likely to perform well in an uncertain market. Among the better bets: funds that invest in mortgage securities, junk bonds, small-cap stocks, emerging markets, and Japanese equities.

Granted, fund investors are operating against a grim backdrop: Unlike last year, when the average fund outpaced the market, and often by a wide margin, funds have been underachievers so far in 1994. Only three stock-fund groups sport positive returns. The star: The specialty-financial group, which made a 5% return by filling up on bank stocks. But overall, equity funds had a total return (appreciation plus reinvested dividends and capital gains) of −2.4%, while the return on the Standard & Poor's 500 fell just 0.17%.

The picture was uglier among bond-fund groups. As of June 6, none of the groups tracked by Morningstar Inc. had positive returns.

To get good returns, investors may want to put money in some of the investment locales that have proved hospitable thus far in 1994, such as Japan. Funds that placed bets on an improving Japanese economy, and a resulting rise in Japan's badly depressed stock market, raked in big rewards. The first half's largest pot went to the DFA Japanese Small Company Fund, a $305 million index fund that racked up a 34.09% return (page 158). The yen's 9% rise against the dollar bolstered the fund's results. The No. 2 spot went to the $4 million Capstone Nikko Japan Fund, which uses a "systematic contrarian strategy." After figuring out which 300 stocks on the Tokyo Stock Market have underperformed the market the most, the fund then focuses on 70. The strategy returned 27.69%.

BOTTOMS UP. Where should investors look among the Japan funds? Funds that invest in beaten-down Japanese exporters could be a good buy, advises William McBride, international fund analyst at Lipper Analytical Securities Corp. He thinks Japan funds can move further up because their economy has fallen so far in recent years: "It sounds perverse, but everyone believes things are so chaotic with the Japanese government that this must be the bottom for their economy." McBride also suggests looking at funds that would benefit from an upturn in consumer spending in Japan, such as funds investing in consumer service, goods, and infrastructure stocks.

If investors are worried about currency risk in Japan funds, McBride has an idea: Pacific basin funds with Japanese holdings. Since Asian currencies track the dollar, the Asian investments cancel out some currency risk.

A few domestic sector funds also managed to rack up double-digit returns. Among the top 15 were Fidelity Investments' Select Chemicals, Select Regional Banks, and Select Home Finance Funds. The Merrill Lynch Technology B Fund earned third place with its 21.22% return. But none of the largest equity funds earned in the double digits. Te

EQUITY FUNDS: THE GOOD, THE BAD, THE BIG

In the first half of 1994, mutual funds investing in Japanese stocks racked up double-digit returns, while gold and emerging-markets funds took the biggest hits

THE WINNERS

	Total return*	
DFA JAPANESE SMALL COMPANY	34.09%	JOHN HANCOCK FREEDOM REGIONAL BANK B
CAPSTONE NIKKO JAPAN	27.69	CONSULTING GROUP INTERNATIONAL EQUITY
MERRILL LYNCH TECHNOLOGY B	21.22	STRONG GROWTH
FIDELITY JAPAN	20.59	COHEN & STEERS REALTY
T. ROWE PRICE JAPAN	19.25	FIDELITY SELECT MEDICAL DELIVERY
JAPAN	17.04	MORGAN STANLEY INSTL INTL EQUITY
FAIRMONT	13.91	G.T. AMERICA GROWTH A
FIDELITY SELECT REGIONAL BANKS	13.62	FIDELITY SELECT COMPUTERS
DFA CONTINENTAL SMALL COMPANY	13.58	PRA REAL ESTATE SECURITIES
VANGUARD INTL EQUITY INDEX PACIFIC	13.52	GOLDMAN SACHS GROWTH & INCOME
FIDELITY SELECT HOME FINANCE	13.02	FIDELITY SELECT FINANCIAL SERVICES
FIDELITY SELECT CHEMICALS	12.48	WARBURG PINCUS GROWTH & INCOME
QUANTITATIVE BOSTON FORGN GR & INC ORD	11.80	TWEEDY, BROWNE GLOBAL VALUE
FIDELITY SELECT ELECTRONICS	11.72	BERNSTEIN INTERNATIONAL VALUE
SIFE TRUST	11.37	ROBERTSON STEPHENS VALUE PLUS
G.T. JAPAN GROWTH A	11.11	NOMURA PACIFIC BASIN
SOUTHEASTERN ASSET MGMT VALUE	10.93	DFA INTERNATIONAL HIGH BOOK TO MARKET
MONTGOMERY GROWTH	10.76	JPM INSTITUTIONAL INTL EQUITY
FIDELITY EUROPE CAPITAL APPRECIATION	10.67	PIONEER CAPITAL GROWTH A
METLIFE PORTFOLIOS INTL EQUITY C	10.34%	PIERPONT INTERNATIONAL EQUITY

*APPRECIATION PLUS REINVESTED DIVIDENDS AND CAPITAL GAINS, THROUGH JUNE 6

DATA: MORN

HOW STOCK-FUND GROUPS FARED

	Total return*		Total return*
SPECIALTY-FINANCIAL	5.00%	SPECIALTY-MISCELLANEOUS	–2.73%
SPECIALTY-NATURAL RESOURCES	0.88	SPECIALTY-HEALTH	–2.96
EUROPE	0.51	INCOME	–3.21
FOREIGN	–0.26	SMALL COMPANY	–3.54
SPECIALTY-TECHNOLOGY	–0.32	PACIFIC	–3.81
GROWTH & INCOME	–0.96	MAXIMUM GROWTH	–4.52
WORLD	–1.06	SPECIALTY-UTILITIES	–5.95
EQUITY-INCOME	–1.22	SPECIALTY-PRECIOUS METALS	–9.79
BALANCED	–1.69	**ALL EQUITY FUNDS**	**–2.43**
GROWTH	–1.90	**U.S. DIVERSIFIED EQUITY**	**–2.03**
ASSET ALLOCATION	–2.28	**S&P 500 INDEX**	**–0.17**

*Appreciation plus reinvested dividends and capital gains through June 6 DATA: MORNINGSTAR INC.

ler in 1994 was $10.6 billion Vanrd/Windsor Fund, 3.95% year-to-date. tfolio manager John f achieved that by entrating on oil and savings and loans, bank and insurance pany stocks.

verall, success sto- were few and far ween in 1994's first . Rising interest s triggered what ter Frank, chief in- tment officer at *oghue's Moneyletter*, s a "semihysterical period" in the d market. Bond investors ran for hills, pulling $7.7 billion out of bond ls in March. April's outflow, though, ed to $4.8 billion, and Arcata (Calbased AMG Data Services reports ll inflows in recent weeks. Fueling e of the initial panic were accounts uge losses from fund holdings of ly volatile esoteric mortgage securs. The worst-hit of all U. S. bond ls: the $634.5 million Piper Jaffray itutional Government Income Fund, ch plunged 22.44%.

RDUMPED. Investors dumped mort- e funds more than any other type of d fund. As a category, the funds suffd a –2.83% return. Treasury funds e even worse, returning –3.22%. But worst performers were the international bond funds, which were hurt by higher rates in Europe and a plunge in emerging market debt. They fell 6.23%.

Dare investors move back into bond funds? Some pros see selected bargains. Plain-vanilla mortgage funds may benefit from the halt in prepayments. Bond funds that took big hits from mortgage derivatives may be shrewd plays. Mortgage derivatives have been "dumped beyond all rationality," says John Rekenthaler, editor of *Morningstar Mutual Funds*. "A portfolio manager who buys these will probably make a lot of money in the next few years."

Ironically, one of the brighter spots in the bond market were high-yield corporate bond funds, which emerged relatively unscathed at –1.79%. About $1.1 million has moved into junk-bond funds so far this year. Many of the funds took hits from holdings of emerging market debt. Among their U. S. holdings, however, an improving economy should raise profits, lessening credit risks.

Investors in stock funds aren't feeling quite as much pain as their bond-fund brethren. Having learned to take the long view from the crash of 1987, they didn't cash out at the first signs of a correction. While the inflow into equity funds dropped from $14 billion in February to $6 billion in March, the pace picked up to an $11.3 billion inflow in April, according to the Investment Company Institute. Equity funds received $2 billion to $2.5 billion a week in May, "among the strongest flows we've seen in 1994," says Robert Adler, of AMG Data Services.

As usual, some of 1994's biggest stock-fund losers were 1993's biggest winners. After racking up a 97% return in 1993, precious metals funds, for example, are down about 10%. The worst-performing stock fund at midyear: Monitrend Gold, down more than 31%. BJB International Equity A took the second-worst slot, falling about 25% for the year to date. That's a far cry from the healthy double-digit returns that many interna-

THE LOSERS

	Total return*		Total return*
ND GOLD	–31.69%	LEXINGTON STRATEGIC INVESTMENTS	–15.30%
RNATIONAL EQUITY A	–25.64	VAN ECK ASIA DYNASTY B	–15.08
N HERITAGE	–21.57	IVY CHINA REGION A	–14.78
E AMERICA HARTWELL EMERG GR A	–19.71	MERRILL LYNCH DRAGON B	–14.71
SOUTHEAST ASIA	–19.56	G.T. GLOBAL NEW PACIFIC GROWTH A	–14.69
ERVICES GOLD	–18.75	EXCEL VALUE	–14.63
N OCEAN TECHNOLOGY & GROWTH	–18.55	STEADMAN AMERICAN INDUSTRY	–14.10
TIONAL GREATER CHINA GROWTH	–18.35	BULL & BEAR GOLD INVESTORS	–13.98
EQUIFUND H.K. NATL FID EQ	–18.34	FIDELITY SELECT BROKERAGE & INVESTMNT	–13.88
N INVESTMENT	–18.31	DREYFUS EDISON ELECTRIC INDEX	–13.81
HON GREATER CHINA GROWTH	–17.98	KEYSTONE PRECIOUS METALS HOLDINGS	–13.79
BAL	–17.02	DEAN WITTER PACIFIC GROWTH	–13.73
IMER GLOBAL BIO-TECH	–16.79	SCUDDER PACIFIC OPPORTUNITIES	–13.53
PRICE NEW ASIA	–16.72	CAPPIELLO-RUSHMORE UTILITY INCOME	–13.51
E FUND OF THE SOUTHWEST	–16.69	GAM INTERNATIONAL	–13.51
EAR SPECIAL EQUITIES	–16.47	FIDELITY EMERGING MARKETS	–13.50
SELECT SOFTWARE & COMPUTER	–16.35	STEADMAN ASSOCIATED	–13.25
SELECT BIOTECHNOLOGY	–15.80	DFA PACIFIC RIM SMALL COMPANY	–13.13
STANLEY INSTL ASIAN EQUITY	–15.46	MORGAN STANLEY ASIAN GROWTH A	–12.95
STREET PACIFIC BASIN EQUITY	–15.31	MFS GOLD & NATURAL RESOURCES B	–12.92

PLUS REINVESTED DIVIDENDS AND CAPITAL GAINS, THROUGH JUNE 6 DATA: MORNINGSTAR INC.

THE LARGEST

	Assets* Billions	Total return** Year-to-date	5-yr. avg.
FIDELITY MAGELLAN	$34.34	–1.06%	14.38%
INVESTMENT COMPANY OF AMERICA	18.68	0.27	10.93
WASHINGTON MUTUAL INVESTORS	12.40	0.58	9.91
FIDELITY ASSET MANAGER	11.21	–3.72	12.84
VANGUARD/WINDSOR	10.57	3.95	9.48
INCOME FUND OF AMERICA	10.25	–3.14	9.89
FIDELITY PURITAN	10.40	1.89	11.69
TWENTIETH CENTURY ULTRA INVESTORS	9.27	–4.96	19.09
JANUS	9.22	–0.62	13.48
VANGUARD INDEX 500	8.37	–0.44	10.39
FIDELITY GROWTH & INCOME	8.43	0.26	13.81
VANGUARD/WELLINGTON	8.23	–0.05	9.46
VANGUARD/WINDSOR II	7.77	0.59	9.68
FIDELITY CONTRAFUND	7.71	–0.53	20.81
EUROPACIFIC GROWTH	6.85	0.41	14.57
FIDELITY EQUITY-INCOME	6.94	0.93	9.91
DEAN WITTER DIVIDEND GROWTH SECS	6.69	–1.88	9.54
VANGUARD/WELLESLEY INCOME	6.00	–2.24	10.74
MERRILL LYNCH GLOBAL ALLOCATION B	5.82	1.30	14.27
FIDELITY EQUITY-INCOME II	6.10	3.10	0.00

*As of May 31 **Includes dividends and capital gains All 1994 return data through June 6

tional equity funds produced last year.

Investors who ventured into emerging markets funds also saw their fortunes take an ugly turn. The high-risk funds had been immensely popular. Estimated net sales of Pacific region funds skyrocketed from $693 million in 1992 to $6.3 billion in 1993, according to Lipper. An additional $500 million went in during 1994's first quarter—even as the market was going down. Many overheated Southeast Asian and Latin American markets tanked in the first half. Pacific funds ended the first half down 3.81%, despite the Japanese market's big rebound.

Investors would do well to keep an eye on emerging markets funds. "I don't know if the emerging markets will rebound in the next six months," says Rekenthaler. "But the long-term story is more attractive now because the markets are down 10% to 20% and the fundamentals are the same." Jay Schabacker, editor of *Mutual Fund Investing*, is advising hardy investors to move into the $682 million Montgomery Emerging Markets fund, which focuses on Southeast Asian markets but invests in about 25 emerging market countries. The fund is somewhat bearish on Mexico but likes Argentina and Brazil. Its portfolio managers are looking at Southeast Asia and say that Taiwan "looks favorable."

THRIVERS. But rather than bottomfish, some advisors suggest latching onto funds that have thrived in this difficult environment. Kurt Brouwer, president of San Francisco investment advisory firm Brouwer & Janachowski, thinks value-oriented small-cap funds will continue to do well and likes "special-situation" funds, such as Michael F. Price's Mutual Beacon Fund, which rose 4.54% as of June 6. The $1 billion fund invests in the stocks and bonds of bankrupt companies and in takeovers, among other things. Such funds, Brouwer reasons, can do well even if the overall market does poorly.

Special-situation funds favored by Schabacker include the Robertson Stephens Contrarian Fund, which has been making natural resource, energy, and commodity investments. Portfolio manager Paul Stephens has also taken short positions in overvalued stocks with good downside potential.

Most investors realize that it will be more difficult to achieve high returns in the future. Instead of the annual average of 16% from 1982 to 1993, industry execs say annual returns will be closer to 5% to 8% in coming years. That may not seem like very happy returns. But after 1994's first half, even single-digit returns may look very good.

By Suzanne Woolley in New York

HOW THE BOND FUNDS FARED IN THE FIRST HA

BOND-FUND GROUPS

	Total return*		Total retu
GOVERNMENT -ADJ. RATE MTG	–0.33%	CORPORATE -GENERAL	–2
CORPORATE -HIGH YIELD	–1.79	GOVERNMENT -MORTGAGE	–2
CORPORATE -HIGH QUALITY	–1.92	MUNICIPAL	–2
SHORT-TERM WORLD INCOME	–2.17	CONVERTIBLE	–2
TAXABLE FIXED-INCOME FUNDS	–2.48	GOVERNMENT -TREASURY	–3
GOVERNMENT -GENERAL	–2.73	INTERNATIONAL	–6

TAXABLE BOND FUNDS

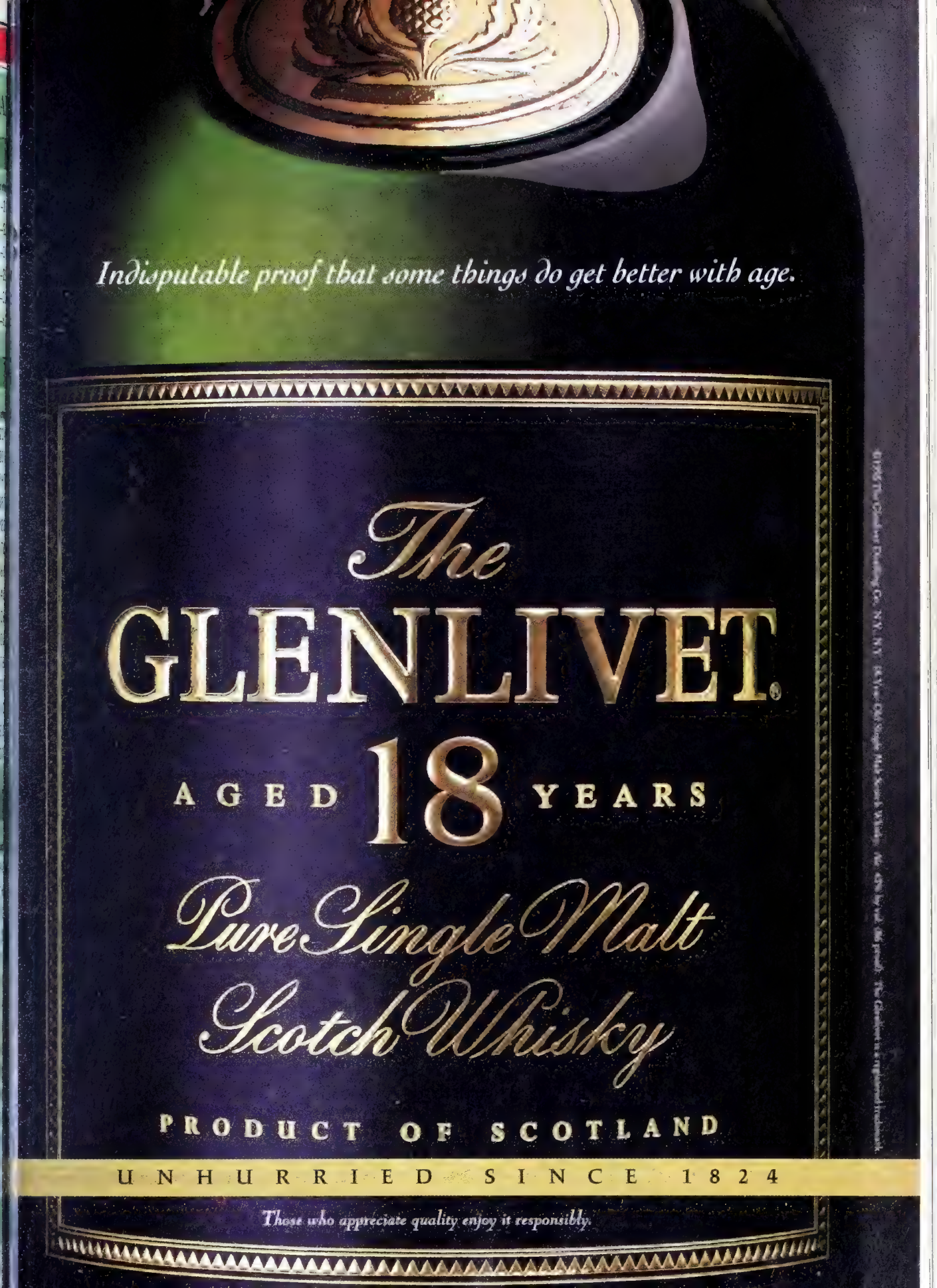
THE BEST	Total return*	THE WORST	Total retu
FRANKLIN/TEMPLETON HARD CURRENCY	6.03%	PIPER JAFFRAY INSTL GOVT INCOME	–22.
FRANKLIN/TEMPLETON HIGH-INC CURRENCY	5.39	MANAGERS INTERMEDIATE MORTGAGE	–20.
FRANKLIN/TEMPLETON GLOBAL CURRENCY	4.81	FIDELITY NEW MARKETS INCOME	–19.
NORTHEAST INVESTORS	4.06	MONITOR MORTGAGE SECURITIES TR	–18.
OLYMPIC LOW DURATION	2.18	BAILARD, BIEHL & KAISER INTL F/I	–18.
SMITH BREEDEN INSTL SHORT DUR US GOVT	1.78	G.T. GLOBAL STRATEGIC INCOME B	–17.
SMITH BREEDEN SHORT DURATION US GOV I	1.68	G.T. GLOBAL HIGH-INCOME B	–16.
KEYSTONE AMERICA AUSTRALIA INCOME A	1.68	FUNDAMENTAL U.S. GOVT STRATEGIC INC	–14.
SEVEN SEAS YIELD PLUS	1.38	G.T. GLOBAL GOVERNMENT INCOME B	–13.
REGIS SIRACH SHORT-TERM RESERVES	1.30	FIDELITY GLOBAL BOND	–13.
FFTW U.S. SHORT-TERM FIXED-INCOME	1.27	BENHAM TARGET MATURITIES 2020	–11.
MAINSTAY HIGH-YIELD CORPORATE BOND	1.22	BEAR STEARNS EMERGING MARKETS DEBT	–11.
EATON VANCE SHORT-TERM TREASURY	1.17	BULL & BEAR GLOBAL INCOME	–11.
RSI RETIREMENT TRUST SHORT-TERM INVMT	1.11	BENHAM TARGET MATURITIES 2015	–10.
PERMANENT PORTFOLIO TREASURY BILL	1.11	FIDELITY SPARTAN LONG-TERM GOVT BOND	–10.

TAX-FREE BOND FUNDS

THE BEST	Total return*	THE WORST	Total retur
HANIFEN, IMHOFF CO BONDSHARES	2.39%	CALIFORNIA MUNI	–9.
CALVERT TAX-FREE RESERV LIMITED-TRM A	1.04	NEW YORK MUNI	–7.
TWENTIETH CENTURY TAX-EXMPT SHORT-TRM	0.89	ALLIANCE MUNI INCOME II FL C	–7.
VENTURE MUNI (+) PLUS	0.88	ALLIANCE MUNI INCOME II NJ C	–6.
VANGUARD MUNICIPAL SHORT-TERM	0.54	GUARDIAN TAX-EXEMPT	–6.
KENT MI MUNI LTD MATURITY BOND INSTL	0.33	ALLIANCE MUNI INCOME INSURED CA B	–6.
MERRILL LYNCH MUNICIPAL LTD MATURITY A	0.31	FINANCIAL HORIZONS MUNICIPAL BOND	–6.
KENT MI MUNI LTD MATURITY BOND INVMT	0.23	CGM AMERICAN TAX-FREE	–6.
SHORT-TERM MUNICIPAL INSTL	0.23	FIRST UNION NC MUNICIPAL BOND C INVMT	–6.0
USAA TAX-EXEMPT SHORT-TERM	0.14	BULL & BEAR MUNICIPAL INCOME	–5.9
T. ROWE PRICE MD SHORT-TERM TAX-FREE	0.12	ALLIANCE MUNI INCOME INSURED CA A	–5.8
FORUM TAXSAVER BOND	0.06	FRANKLIN FL INSURED TAX-FREE INCOME	–5.3
STRONG SHORT-TERM MUNICIPAL BOND	–0.01	LORD ABBETT CA TAX-FREE INCOME	–5.2
UST MASTER SHORT-TERM TAX-EXEMPT SECS	–0.07	CONSULTING GROUP MUNICIPAL BOND	–5.2
WARBURG PINCUS NY MUNICIPAL BOND	–0.11	ALLIANCE MUNI INCOME NATIONAL B	–5.2

*Appreciation plus reinvested dividends and capital gains through June 6

DATA: MORNINGSTAR INC.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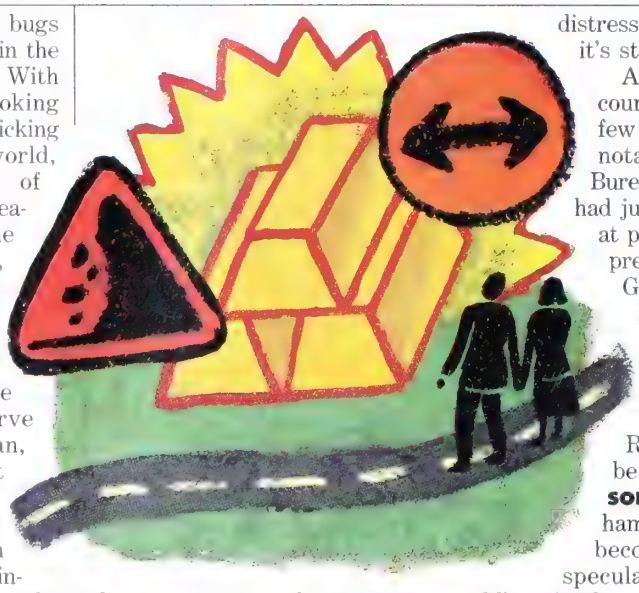
A MARKET INOCULATED AGAINST GOLD FEVER

Despite hot prospects, gold is cold. Speculators are sticking to silver for now

WHERE TO INVEST

For months, gold bugs have had it made in the shade—in theory. With fundamentals looking solid, economies picking up around the world, and the threat of U. S. inflation looming, gold bugs reason, the yellow metal should be the year's hot commodity. But instead, gold bugs have found themselves in the economic equivalent of a roach motel: locked into lower prices, with no breakout in sight.



Why no gold fever? Part of the blame must go to Federal Reserve Board Chairman Alan Greenspan, who pegged gold as an important indicator in his battle against inflation. If gold were to rise, investors fear, the Fed would push up interest rates, thereby cooling inflation and causing gold prices to decline. The market is also feeling pressure from gold producers and dealers itching to sell into rallies. And there's no sign of marquee investors such as George Soros, who helped end the metal's five-year bear market by igniting speculative interest a year ago. "I don't see any rush to buy gold. We're not going anywhere," declares William B. O'Neill, senior futures strategist at Merrill Lynch & Co.

BULL-PROOF METAL? For the long term, though, "bullionaires" still have reason to hope. While a repeat performance of last summer's sharp rally seems unlikely, there are enough bullish factors to cause gold to rise modestly over the balance of the year and even to surpass $400 an ounce. And since the bear market appears to have bottomed out last year, there seems little potential for a drop below $360. "The risk you have is that you may have to sit on [gold] for a while," notes Bernard C. Savaiko, senior analyst at PaineWebber.

The current doldrums are in stark contrast to gold's wild and crazy ride in 1993. Gold soared to $409 during the summer, collapsed to $343, and rebounded to end the year at $392. This year, gold languished for several months, then recovered a bit in late May. As of early June, it stood at $383, down 2.3% from January. And gold-mining stocks fared even worse: Gold-oriented mutual funds lost 7.6% through May 31.

The metal has shrugged off several opportunities to rally. Even when the threat of terrorism idled hundreds of South African mineworkers in mid-April, prices barely responded. Gold has also ignored favorable supply-and-demand trends. Mine production rose just 2% in 1993, the lowest growth in output since 1980. And central banks have cut back gold sales, but even so, prices have failed to respond.

There is at least a golden lining in this bleak situation. Says Ian C. MacDonald, chief of precious-metals trading at Crédit Suisse: "The market has absorbed a tremendous amount of distressed selling [in recent years], and it's still holding up."

A good dose of U. S. inflation, of course, would give gold a boost. A few signs do point to higher prices, notably the Commodity Research Bureau index, which as of early June had jumped 14% from a year ago. But at present growth rates, inflationary pressures remain virtually nil. And Greenspan appears determined to keep it that way. "We're likely to see interest rates rise more rapidly than inflation," predicts University of Chicago professor of international economics Robert Z. Aliber. "That can't be good for gold."

SOLID FOOTING. Yet that may not hamper silver markets, which have become a favorite playground for speculators. In March, U. S. hedge funds were rumored to be spending as much as $1 billion to buy the metal from warehouses. After reaching a 1994 high of $5.80 per ounce on May 23, silver fell back to $5.26 as of early June, as speculators cashed in their profits.

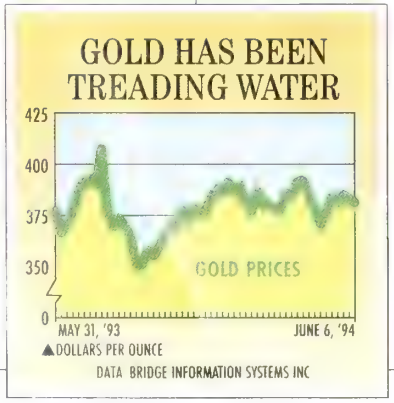
Analysts expect to see more gyrations between $5 and $6 an ounce over the course of the year. Platinum, meanwhile, has made small gains amid strong demand for automobiles, which use the metal in catalytic converters. Some believe stepped-up industrial demand will put platinum on an especially solid footing and may help support silver prices, too.

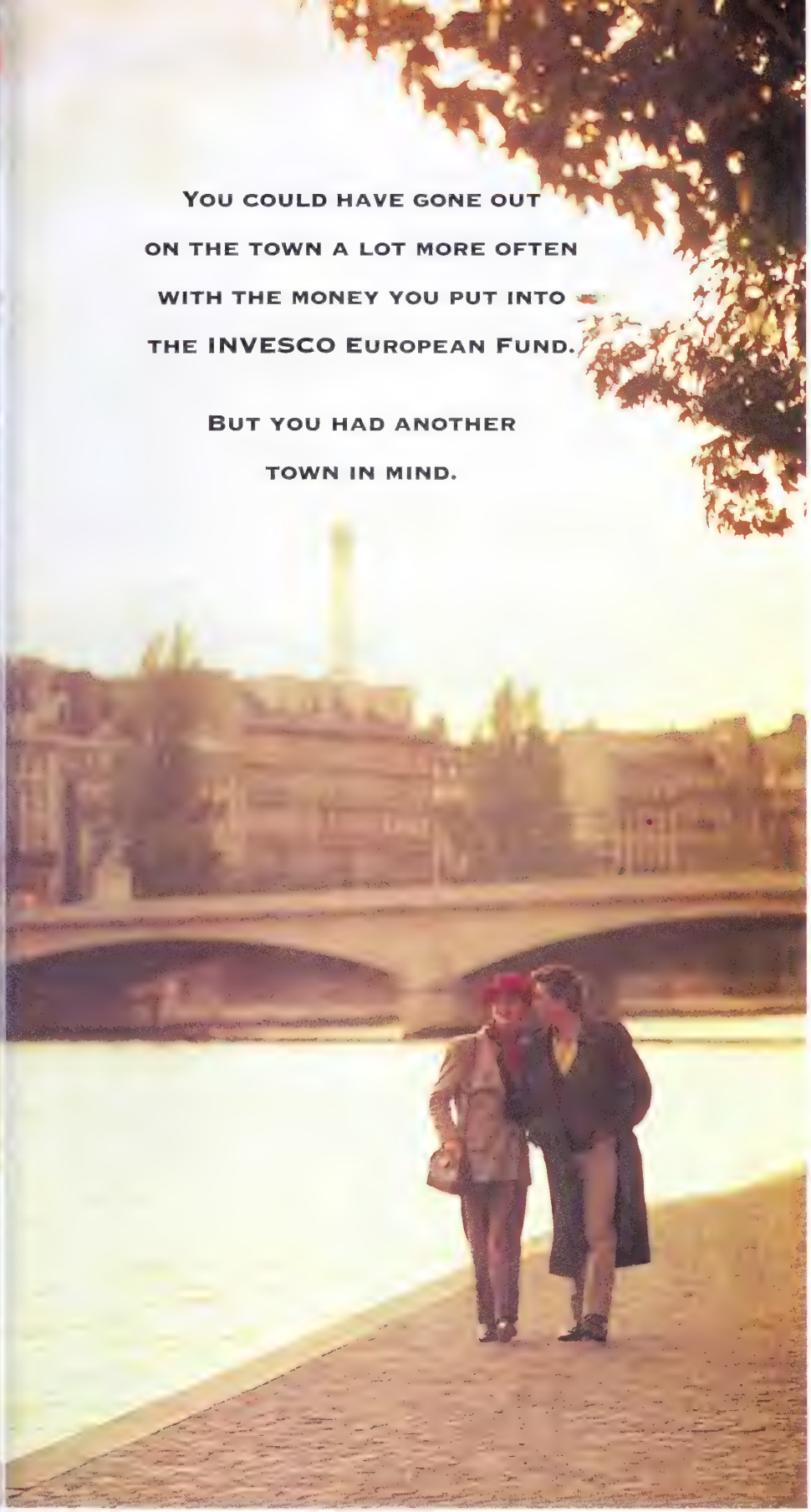
And that rising tide may yet buoy gold. What bugs really want is a big economic event—a dollar crisis, for instance—that could bust the market wide open. But barring such a calamity, gold aficionados will remain the bad news bugs of the investment world.

By Greg Burns in Chicago

ACTION

Gold should rise modestly over the year, so the best play may be to buy —and then sit tight





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While past performance is no guarantee of future results, the European Fund was listed as a "Best Buy" by Forbes magazine in their August, 1993 issue.[1] And Lipper Analytical Services ranked it in the top five of all European funds for the five-year period ended 3/31/94.[2]

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Annualized return through March 31, 1994

One Year	21.06%
Three Year	6.99%
Five Year	8.30%
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ES designation of the fund as a "Best Buy" based on proprietary analysis of 5-year, risk-adjusted performance and expenses as of 6/30/93
R Analytical Services ranked the fund #4 out of 9 European-region funds for the five-year period ended 3/31/94
Return assumes reinvestment of dividend and capital gain distributions. Investment return and principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less their original cost. INVESCO Funds Group, Inc., Distributor

HAVE A FEELING ABOUT RATES? SPIN THE OPTIONS WHEEL

Small investors don't need a lot of cash to bet on the bond market. They do need steady nerves

WHERE TO INVEST

Bonds have been taking a wild ride lately. Over the past four months, inflation fears sent long-term prices plunging, knocking $100 off the face value of a $1,000 bond. For folks willing to take a risk, those volatile price movements add up to opportunity. Using options, even small-time investors can place big bets on the direction of interest rates.

To be sure, it's a swim in shark-infested waters. Professional traders and big institutions, such as banks, dominate the actively traded interest-rate markets at the Chicago Board of Trade and the Chicago Mercantile Exchange. And First Lady Hillary Rodham Clinton's trading record notwithstanding, most of the individual investors who dabble in derivatives lose money. "It's not for the faint of heart. We're talking about a market with some pretty big spikes," notes Thomas A. Tyler Jr., a Chicago commodity-market consultant.

PLEASANT DREAMS. For small-time options traders, the best path is to buy and not sell contracts, so your losses are limited to the "premium," or price, of the contract. Small-time speculators favor straightforward purchases of either a single type of put, which confers the right to sell at a specific price in the future, or a single type of call, which confers the right to buy. Both hold out the chance of a quick jackpot, notes David A. Andalman, senior options analyst at Chicago's Alaron Trading Corp.: "The likelihood of the average Joe doubling his money is remote, but that's what people dream about."

It doesn't necessarily cost a lot to play. At the beginning of June, for instance, an investor betting that rates were going up could have purchased a U. S. Treasury bond put for a premium of $1,500 plus commission. That put gives the investor the option to sell a futures contract representing $100,000 in bonds at a price of 104, about where the market was trading. To overcome the premium, bond prices would have to decline—and fast. By Aug. 19, when the put expires, yields would have to rise from 7.3% to about 7.7%. If rates rose to 8%, the put would be worth about $3,100. If rates stay the same or decline by Aug. 19, however, it's like shooting snake eyes in Vegas—you lose.

For a speculator expecting rates to retreat from their present peaks, buying a call is the way to go. A September call option on 10-year Treasury-note futures at the Chicago Board of Trade also cost $1,500 as of early June. This time, the entire stake goes down the drain if rates stay the same or go higher. In fact, because of the premium, yields have to fall by nearly a half-percentage point by the option's Aug. 19 expiration before you would see any profit. But if the market moves your way, it's as much fun as hitting three cherries at the slots. If the yield on the 10-year note fell a full percentage point, to about 6.1%, the call would be worth some $6,000, quadrupling your money.

HEDGES. If you believe rates will move dramatically but aren't sure which way, you can make money by "spreads." An investor can buy a put and a call at identical prices for about $4,500. That is the maximum amount at risk. If yields move about a half-point up or down, the spread would be profitable.

ACTION

Buy, don't s options to li your losses the premiu or price, the contra

Pros often use interest-rate optio to hedge. An investor holding a portfo of bonds can simply buy a put to offs losses caused by rising rates. Sor small-fry investors are having some su cess with strategies that cover a sm part of a portfolio's losses.

It may sound simple, but options a only for the valiant few. In Board Trade interest-rate contracts, for i stance, individual investors account f as little as 3% of the business. A of those, according to industry es mates, more than 80% lose money. O New Jersey-based user of interest-ra options suggests that anyone spec lating as he does, "should have conviction about where rates a going, and they should be prepar to lose all their money." Unless, that they happen to be right.

By Greg Burns in Chica

A MENU OF INTEREST-RATE OPTIONS

U.S. TREASURY BOND Known for big price swings. Liquid even for small trades, it is popular among small investors. Traded on the Chicago Board of Trade (CBOT).

U.S TREASURY NOTE Includes 10-, 5-, and 2-year maturities. Growing in popularity. 10-year volume soaring as government shifts debt financing to shorter-term instruments. CBOT.

LIBOR Based on London Interbank rate, 30-day maturities. Retail interest rare, though spread trades attract some small-time traders. Traded on the Chicago Mercantile Exchange.

U.S. TREASURY RATES Thinly traded. Prices are based on yields. Market maker system guarantees minimum bid-ask spread. Chicago Board Options Exchange.

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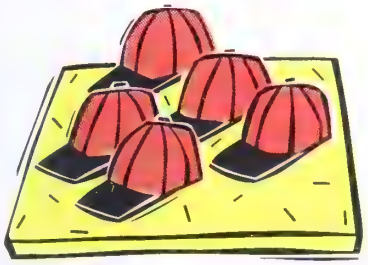
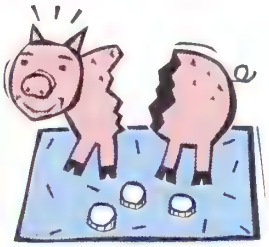
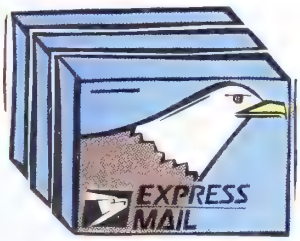


Person has to deliver 50 hats by tomorrow.



Doesn't have much money.

Goes to Post Office.



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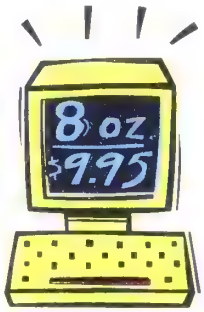

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Anybody Seen Gomer Around Here?

Scott Robertson told his friends he was moving to Birmingham. And they told him he'd lost his marbles. Because to them, Alabama meant Gomer Pyle or the Beverly Hillbillies – not the kind of place a corporate man would leave Washington, D.C. for to further his career. But to Scott, Alabama meant a great opportunity. So he figured he would at least give it a year. That was in 1979.

"As I've traveled, I've learned everybody has an Alabama story. Not about racism, pollution, or the Gomer way of doing things. But about friendly people, gorgeous countryside, and phenomenal cultural experiences. And if they'd actually lived here, the story is usually about how much they loved it and want to move back. My story's about how I had to drag my wife here kicking and screaming. Yet now I could never get her to move north of downtown Birmingham."

Scott believes the only problem Alabama has is persuading prospects to come here. But once here, they become hooked and never want to leave.

ALABAMA HAS ONE OF THE HIGHEST CONCENTRATIONS OF REGISTERED ENGINEERS IN THE NATION.

Maybe that's because, according to Scott, Alabama is an "island in the sea of chaos." BE&K, where Scott is Vice President of Communications, has certainly prospered, having been ranked as one of the top 25 engineering firms and one of the 100 best companies to work for in the entire country. While in the Alabama business market, BE&K is recognized for having achieved a strong presence around the world. And we think that's about as far from Mayberry as you can get.

ALABAMA

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TOP OF THE HEAP

So far, these are 1994's winners

▲ **JUICY DEAL**
Snapple snapped up $30 million worth of ECC International's new vending machine

◀ **CHIPS 'R' US**
U.S. semiconductors keep stealing the show from Japan with hot new designs

▲ **HAPPY MATC**
Centex stock has jumped 250% sinc its merger with MFS Communicatio

WHERE TO INVEST

A defense contractor benefiting from military cutbacks? An index fund leading the equity pack? So far, 1994 has some oddball winners. This topsy-turvy time of correction and volatility has turned markets upside down, undercutting traditional leaders while giving new life to former laggards such as Japan.

BEST NYSE STOCK

You would hardly expect to find a defense contractor at the top of the NYSE. But so far, *ECC International Corp.*'s diversification into vending machines has been a hit. The company's stock jumped 243%—primarily because Snapple snapped up $30 million worth of its glass-front machines, which can hold as many as 54 beverage selections in glass bottles.

Meanwhile, the company's core business is no lemon. Most of its $65 million in 1993 sales came from the computer simulators that ECC makes to train personnel in maintaining and operating military systems. This training is "very cost-effective in a declining defense market," says President and CEO George W. Murphy. After two years of losses, ECC has some $65 million worth of Pentagon contracts to sell plane and tank simulators to such countries as Egypt, Finland, and Saudi Arabia.

BEST AMEX STOCK

The picture brightened for *TSX Corp.* on Mar. 14, when cable-television powerhouse Tele-Communications Inc. took a 49% stake in the El Paso company. Its Texscan unit supplies equipment to cable networks. The stock of TSX is up 234%, to $16, since January. "Our survivability is no longer in question," says Chairman and President William H. Lambert, who took over when TSX emerged from Chapter 11 in 1988. He used the TCI equity to pay off most of the $17 million debt he inherited and now is planning to target booming overseas markets.

BEST OTC STOCK

A hostile-takeover-turned-friendly catapulted *Centex Telemanagement Inc.*, a telecommunications service provide the top of NASDAQ, up 250% since uary. Centex stock had been languish near $4 when MFS Communications made an offer of $9 a share in e March. Centex first rejected the o but later acquiesced to a sweetened bid.

San Francisco-based Centex, with million in sales last year, assembles cost services for small and midsize b nesses. Last year, profits were slipp as a consequence of both increased c petition and deregulation. That, howe doesn't faze Omaha-based MFS, an gressive, independent provider of fi optic telephone service. MFS wants give inexpensive service to Cent 11,000 customers over a network alre in 24 markets and expanding to 75.

BEST STOCK GROUP

Semiconductor companies in the U.S. main hot, up 33% this year. Doug drey, director of statistical programs the Semiconductor Industry Assn., tributes the sector's strength to sup or advanced integrated-circuit desi

◀ **COFFEE BREAK**
Dwindling supplies and brewing demand have made futures prices percolate

▶ **CASH CACHE**
Neil Devlin's fund was the right place to be when the greenback tanked

▶ **HELPING HAND**
TSX stock got a boost of 234% from cable powerhouse TCI

)KING UP
stirrings of
y drove the
28.5% higher
ır terms

eased access to Japan's market, and Sematech Inc., the industry-governit consortium formed to get U.S. makers off the endangered-species Surging demand for chips in everyg from personal computers to cellulphones and antilock brakes should business brisk. The worldwide maris expected to grow from $77 billion year to $93 billion.

EST STOCK FUND MANAGER

definition, index funds aren't suped to lead the pack because they esent a market average, but *DFA mese Small Company*, which has dered total returns of 34.24% so far in , is a pretty esoteric slice of stocks. omprises some 600 small Japanese panies. DFA buys and holds them l they get too big, so Japan's recovhas more to do with boosting the ll fry in the $305 million fund than wiles of manager David Price.

BEST BOND FUND MANAGER

nklin Templeton Hard Currency also s its robust 7% return less to manager Neil Devlin than to outside forces. The $38 million fund is "primarily for people in the U.S. looking to protect against depreciation of the dollar," says Devlin, and that was the right place to be when the greenback tanked. Devlin's strategy is highly circumscribed: Using Swiss francs as a core currency, Devlin is required by the fund's prospectus to invest in the five developed countries with the lowest inflation. He's now in Denmark, Japan, Switzerland, Australia, and New Zealand. Strong growth in commodities exports from the last two also helped make Devlin a winner.

BEST OVERSEAS MARKET

Stirrings of an economic recovery and waves of cash from abroad turned *Tokyo* into the industrial world's top-performing market so far this year. In dollar terms, the Nikkei stock average rose 28.5% through June 7. Further gains are likely. Japanese businesses have slashed costs, which should boost profits by up to 40% this year. The Bank of Japan may help this summer by cutting interest rates, already at record lows. Rod Smyth, strategist for Baring Securities (Japan) Ltd., thus expects the Nikkei to rise 19%, to 25,000, by this time next year.

BEST COMMODITIES

For those who like their commodities hot, *coffee* is the market of choice. Futures prices for a pound of beans at New York's Coffee, Sugar & Cocoa Exchange more than doubled, from 72¢ on Jan. 5 to $1.46 on May 24. That may be just a warm-up: By autumn, the peak consumption season, coffee prices could percolate past $2, says Judith E. Ganes, senior analyst at Merrill Lynch & Co.

Why the run on java? Extremely tight supplies worldwide. Coffee prices got so depressed in the early 1990s that producers didn't bother to fertilize their trees, much less plant new ones. It's a good combo for speculators: brewing demand and stockpiles that barely amount to a hill of beans.

By Pam Black with William Glasgall in New York, Peter Burrows in Dallas, Greg Burns in Chicago, and Kathy Rebello in San Francisco

BY GENE G. MARCIAL

MAYBE YOUR DIAL SHOULD STAY TUNED TO KING WORLD

When King World Productions announced on June 6 that it had closed deals with some TV stations to air its top three syndicated shows until 2000, some Street pros took the news as a portent of something bigger: a buyout. The top programs King World produces and distributes are *Wheel of Fortune*, *Jeopardy*, and *The Oprah Winfrey Show*.

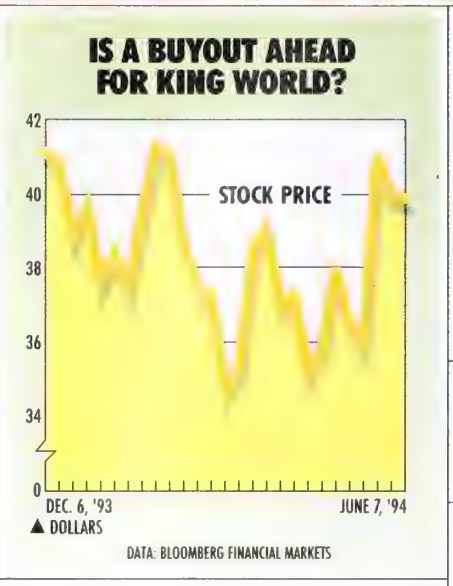
"Mark my words," says a money manager in Beverly Hills, Calif., who has been accumulating shares, "King World will be the next Paramount Communications." Paramount, as every business student knows, was embroiled in a fierce takeover battle between Viacom and QVC Network. This pro insists the stock of King World, trading at 39, will hit the 60s in a buyout fight.

He says Capital Cities/ABC, the entertainment giant, "is poised to make a friendly bid for King World at $55 to $60 a share." The rumor is that Cap Cities/ABC will make its move now, before the impending elimination of the Federal Communications Commission rule on financial interest and syndication ("fin-syn") that bars TV networks from producing and owning their own syndicated shows. Once fin-syn goes, possibly by 1995, the shares of King World will soar, says this investor. A King World spokeswoman declined comment. Cap Cities is always looking for apt acquisitions, but "our policy is not to comment on them," says a spokeswoman.

WON'T SAY NO. Jessica Reif, Oppenheimer's media and entertainment maven, has no quarrel with such speculation. She isn't ruling out CBS as a potential bidder, though. "It could be any of the networks, including NBC," says Reif, who has a buy recommendation on the stock. "Right now, King World is in the enviable position of dominating a market sought after by the giant networks."

She doesn't think King World will nix the idea. She sees it at least merging with a major network or doing a joint venture. The networks are now enjoying an improved economy, which benefits King World: It can raise the price of its shows.

"In any case, shares of King World are inexpensive under any scenario," says Reif. Even without a buyout, she figures the stock will climb to 50.



Paul C. Marsh, entertainment analyst at NatWest Securities, says King World's recent deal with broadcasters will double its license fees to about $1.9 billion. Marsh calculates that King World will earn $2.70 in 1994 and $2.90 in 1995 (excluding the fees from the recently renewed contracts for its top shows).

HEADS UP FOR READ-RITE

Technology stocks aren't a high priority for money manager Richard Hoey, who runs the $1.6 billion Dreyfus Growth & Income Fund. But he's always on the lookout for "pre-crashed" stocks—ones that, like pre-washed jeans, have already been through the wringer. And his latest find is Read-Rite, a major supplier of headstack assemblies and thin-film magnetic recording heads for Winchester disk drives.

Its shares plummeted to 10 late last year, down from 32 in early 1993, and have since crept back to 12. The plunge followed several dismal quarters that made 1993 earnings fall to 2¢ a share, down from $1.59 in 1992.

But there's evidence the company has turned the corner toward recovery, despite continued skepticism on the Street, says Hoey. The shorts, he says, insist that any spike in earnings will be a temporary blip.

"I don't think so," contends Hoey, who says the price war that crimped industry profit margins has abate The worst is over for Read-Rite, whi is poised to recapture its dominant p sition, says Hoey. He figures earnin will rebound to 50¢ a share this ye and to $1.20 or more next year. H concedes the industry is known for c cles of feast and famine.

"The industry is now headed for i next feast," says Hoey. He thinks tha more than any other stock in the bu ness, Read-Rite is the best way to pl the coming upswing.

A FIRM FLOOR UNDE UNITED CAPITAL

For a company in the thick rough-and-tumble real estat United Capital has been havi an upbeat time since 1991, when ear ings started to stabilize. Its share trading on the American Stock E change at 3 at the end of 1992, ha zoomed to 10. Time to bail out? In fa new players have been buying in—co vinced the stock is worth much mor What's the deal?

More steady earnings from its pro erty business, say some investors, pl a big contribution in years ahead fro Kentile Floors, a major producer resilient vinyl flooring that United a quired in March. This newcomer is e pected to help double United's sal and boost earnings.

"Kentile certainly improves the sal and earnings picture of United ar makes it much more attractive," say Elizabeth A. Pearce, director of r search at Anderson Capital Manag ment in San Francisco, which has bee adding to its holdings. She says Unite was underappreciated and underva ued even before it acquired Kentil Back then, she figures, United's prope ty assets were worth about $20 share. With the addition of Kentil which posted sales of $70 million la year, she thinks United, which earne 70¢ a share last year—vs. 44¢ in 1992 should make $1 this year.

United owns and manages low-re properties that it leases to highly vi ible corporate tenants, includin Kmart, PepsiCo, and Boston Chicke The company has more than 6 millio square feet of space, renting at an a erage $3 a foot. Says United Chai man and CEO A. F. Petrocelli: "The lo rent gives a lot of upside potential— we lose a tenant, it's easy to find a other at a higher rent, even in a dow market."

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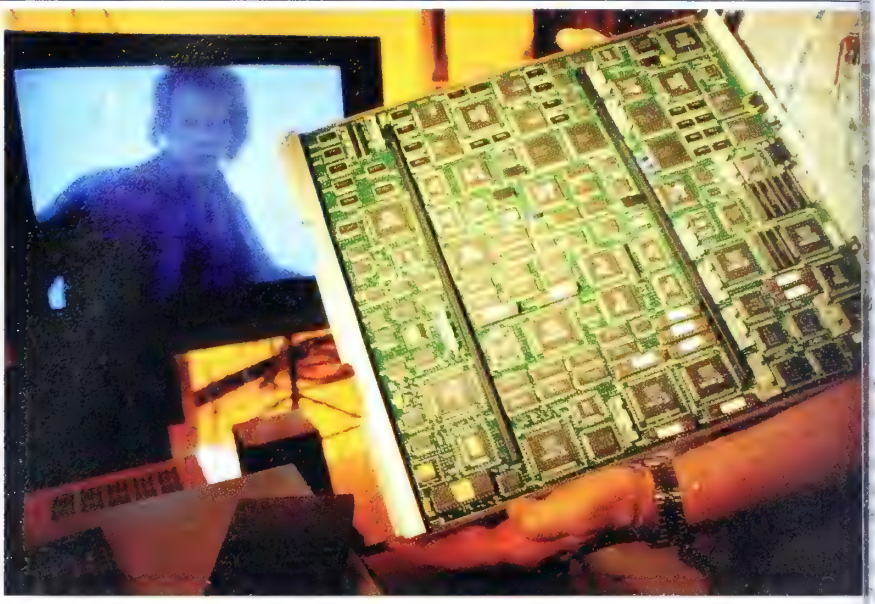
A ROTARY-DIAL ANTIQUE THAT'S GLEAMING LIKE NEW

AT&T's former Western Electric unit has plenty of life in it as a network supplier-designer

When AT&T was broken up 10 years ago, its telecommunications-equipment arm, Western Electric Co., was little more than a backwater division that shoved hardware to captive long-distance and local-phone operations. It had never had to compete for business and showed little indication that it could. The conventional wisdom was that the newly free Baby Bells would jump to Alcatel, Siemens, Northern Telecom, and Western's other competitors. And they did—for a while.

Not anymore. AT&T Network Systems International, the main part of the old Western Electric, is winning one multibillion-dollar phone company contract after another. In the U. S., it's the top supplier of equipment and networking expertise for Baby Bells and others hoping to lay portions of the Information Superhighway. Overseas, it's nailing down communications infrastructure deals from Saudi Arabia to Beijing.



MULTIMEDIA MASTER: AT&T CIRCUITRY IS COMPRESSING SIGNALS FOR VIDEO ON DEMAND

SWITCH HIT. The results are impressive. Last year, while AT&T revenues grew 3.5%, to $67 billion, Network Systems sales jumped 8.5%, to $8.35 billion. This year, analysts expect the unit's sales to surge 15% to 20%—while the long-distance business will be flat or slightly down. In 1993, AT&T's share of the market for digital switches (used in phone-company switching offices) hit 50%, up from 41% in 1990, estimates Northern Business Information Inc.

AT&T's equipment coup stems in part from the phone giant's unique advantages: It not only makes switching gear but also builds transmission equipment and runs its own huge network. "AT&T has the most advanced, most efficient long-distance network in the world," says Michael Arellano, a Northern Business consultant. "So customers are comfortable turning over these very complex new networks to them."

AT&T also is seeing the fruits of a technology bet made 18 months ago. It deduced that telecommunications would go multimedia, requiring high-capacity ("broadband" in industry jargon) digital networks and prompting phone companies to spend billions on networks to handle voice, data, and video. "We put all of Bell Labs' resources into developing broadband networks well ahead of any of our competitors," says Network Systems President Richard McGinn.

The bet proved serendipitous. Local phone companies, fearful of competit from cable TV, are installing broadba networks that can carry such services movies on demand and home shoppi Now, AT&T offers them switches, vid servers, network-management softwa and soon, set-top cable-TV boxes. Th breadth of products and services is w AT&T is both equipment supplier a systems integrator on every broadba contract it has won. "AT&T may not n essarily have the best equipment or best price, but they are the only ones have it all," says Merrill Lynch anal Richard C. Toole.

That doesn't mean AT&T can sit ba and count its winnings. Network S tems has been involved in virtually

AT&T IS WINNING INFO HIGHWAY CONTRACTS AT HOME, INFRASTRUCTURE DEALS ABROAD

DATA: COMPANY REPORTS

	PACIFIC TELESIS	BELL ATLANTIC	SNET	SAUDI ARA
	The California Baby Bell has tapped AT&T for a seven-year project to build an interactive broadband network reaching 5 million homes	AT&T will be prime contractor and systems integrator for interactive TV networks to be built in 20 markets in five years	Setting up a 700,000-line digital network in Connecticut for Southern New England Telephone	AT&T will build manage a 1.5 m line digital netw the largest tele nications contra outside the U.S
TOTAL VALUE ▶	$16 BILLION	$11 BILLION	$4.4 BILLION	$4 BILLION

interactive-TV trial in the past two
s, but no full-scale broadband net-
has been built yet to test its tech-
gy and systems integration in real-
d conditions. In the next few years,
will install a series of full-scale
orks—hybrids that rely on high-
d fiber-optic lines to bring digital
als into a neighborhood and coaxial
for the "final mile" to homes. Con-
ing these networks will be AT&T's
erful asynchronous-transfer-mode
switches.

hat technology is allowing AT&T to
rog Canada's Northern Telecom Inc.,
No. 2 in digital switches. Northern is
vering from a year of turmoil in its
utive suite and delays in shipping
switch software. But President John
vows to catch up: "We have some
high-end broadband switches com-
ut, and we expect to be very com-
ive." Still, the company's share of
digital-switch market slid from 35%
% last year, says Northern Business
rmation.

S ARE RINGING. AT&T's target is 60%
e market, a goal that megadeals
Bell Atlantic, Pacific Bell, and
hern New England Telephone (SNET)
ld help it achieve. The latest: a
7 contract to build a broadband
ork for Southwestern Bell in
ardson, Tex. Overseas, Network
ems recently won a $4 billion con-
to build a state-of-the-art phone
m in Saudi Arabia, the biggest such
act outside the U. S.

t how long will the Baby Bells
w business to a potential enemy?
Bells want to crash AT&T's long-dis-
e market and are bracing for its
into local service, possibly via its
ling buy of McCaw Cellular Com-
ications Inc. But when it comes to
ng the latest gear, Baby Bells don't
many choices. "AT&T is really the
company out there that can offer a
network," says Andrei Jezierski, a
communications consultant at Booz,
n & Hamilton Inc. Adds Charlotte
ninberg, SNET's vice-president for
ork technology: "AT&T is certainly
supplier of choice right now." Maybe
ime for new conventional wisdom.
y Catherine Arnst in New York, with
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ENTINA

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ILLION

CHINA

In Beijing, AT&T will supply transmission equipment, network management, and operator services for a digital phone system

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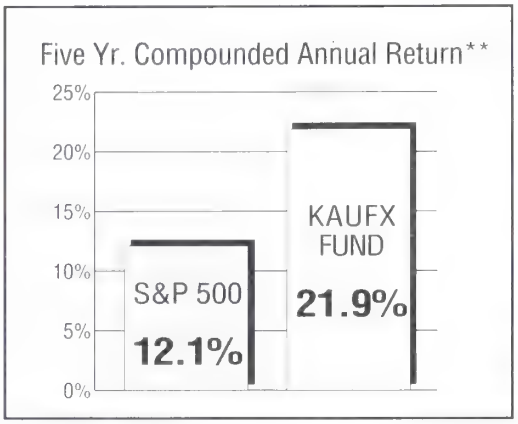


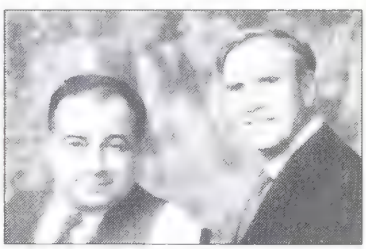
IRA

More than twice the average total annual return of all funds.**

Morningstar 5 Star (*****) Rating

(as of 3/31/94)

The Kaufmann Fund is an aggressive growth fund dedicated to the objective of capital appreciation through investment in small growth companies. The Fund invests primarily in companies beyond the venture stage that are profitable and have substantial growth prospects.



Lawrence Auriana and Hans Utsch, Portfolio co-managers.

For information call: **1-800-562-9210**

*** Period of 12/4/87-3/31/94.**

****Five year period ending 3/31/94, per Lipper Analytical Services.**

Since February 1986, the date the Fund became fully operational after reorganization, the Fund's total return was 224.9%. The Fund's compounded annualized return to March 31, 1994 for the one year, and 2/86-3/94 periods are ***16.1%****,* ***15.7%*** *respectively. Total returns for periods ending March 31, 1994 are historical and include change in share price, reinvestment of dividends and capital gains. There is a 0.2% redemption fee and a 12b-1 fee in excess of 0.25%. The S&P is an unmanaged index consisting of the common stock of 500 publicly traded U.S. companies. For more information including charges and expenses, please read the prospectus carefully before you invest. The performance cited represents past performance which is not indicative of future results; investment performance fluctuates; fund shares when redeemed may be worth more or less than original cost.*

THE KAUFMANN FUND, INC.
17 Battery Place, New York, NY 10004 • Fax (212) 344-6227

COUPON CLIPPERS, SAVE YOUR SCISSORS

Vons supermarkets are revolutionizing the delivery of discounts

For a decade now, the grocery shoppers in most American households have carried a plastic check-cashing card. At supermarkets, computers read data from the card's magnetic stripe, making check approval a snap. That's a nice convenience for shoppers, but technology gurus have realized all those years that the cards could do much more: By electronically linking the identity of purchasers with what they buy, they predicted, convenience cards could help packaged-goods suppliers and supermarkets better understand their businesses and earn better profits.

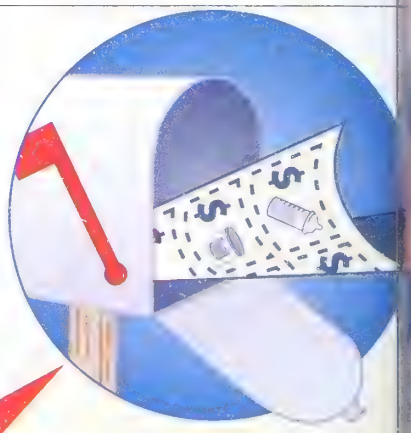
Most supermarket chains have found it difficult to make this happen, mainly because of the huge volumes of data involved. Indeed, in the late 1980s, Citicorp spent $200 million—in vain—to develop a system to collect and sift through floods of retail sales information. But at Vons Cos., the plastic is beginning to live up to its potential. Over the years, Vons, Southern California's largest supermarket chain and No. 9 in the country, has upgraded the check-approval card into an electronic checking card, then added a VonsClub card, which gives automatic discounts on items selected for promotion. Now, the Vons card is evolving into the foundation of a new promotional system that could someday end the blizzard of coupons that clog the mails and fill newspapers—and are often ignored.

TARGET MARKETING. Under a program named Target Vons, started nine months ago, the chain began using the card to capture detailed data about what VonsClub members were buying. Vons has cross-indexed the information by customer and product category so that grocery suppliers can focus promotions on the most appropriate and receptive customers. In the past, promotions have been scattershot. But target marketing such as Vons's, says Willard Bishop, a Barrington (Ill.) grocery-marketing consultant, "is going to explode in the next two or three years as retailers see their competitors embrace it. Within the decade, some kind of card-based program will be in place at most, if not all, successful grocery retailers."

Vons started putting the pieces in place for target marketing in 1990 wh its VonsClub program. Then, the Arca (Calif.) company wanted a way to ward its best customers—some 3 n lion cardholders who ring up weel grocery bills that are 2½ times the av age among Vons shoppers. With a sw of their cards at the checkout, cl members enjoy instant, electronic c counts on promotional items. No m clipping coupons from the Sunday ne paper, no printing or distribution co for the manufacturer—and Vons ea an 8¢ handling fee for each electro coupon. With paper coupons, fees a split with a clearinghouse.

All along, though, Vons had an ult ior motive. It was building a comp hensive database of exactly what's shoppers' baskets each time they lea the store. Using that data, Vons c understand consumer behavior bett and send a monthly mailing of indivi ally laser-printed discount coupons each VonsClub member. Packaged-goo companies select their target custome and pay Vons to print the coupon. "I micromarketing, and Vons is on the le ing edge," says Susan Widham, mark ing vice-president at Beech-Nut Nutriti Corp. in St. Louis. "It's not cheap, but terms of promotional programs I' worked with, it's far and away the m sophisticated."

The key is the precision. McCormick Co., for example, promotes its Cake Ma icings and decorations only to those w have previously bought cake mixes. C fee roaster F. Gavina & Sons recent used a VonsClub mailing to offer $1 its upscale Don Francisco brand, but or



AT THE MANUFACTURER:
Brand managers select lifestyle and purchasing categories to pinpoint promotions. They can also target purchasers of competing brands. Vons then prepares monthly mailers with individually laser-printed coupons targeted to specific households.

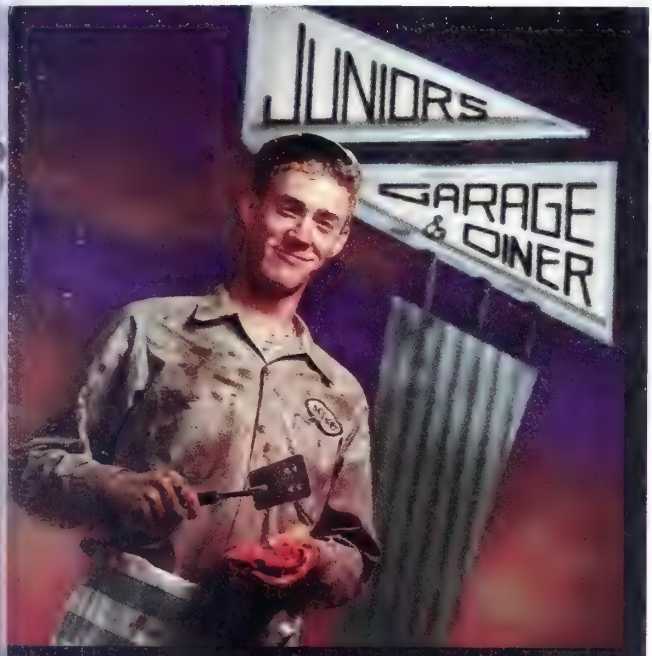
AT VONS HEADQUARTERS:
Customers are sorted into nearly 200 groups based on goods bought, ranging from antacids to wine, and into lifestyle groups—consumers of children's products, for instance.

MARKETING NUGGETS: THEY'RE IN THE CARDS

How the Vons card works for consumers and marketers

AT THE CHECKOUT:
Customer swipes magnetic card and receives automatic deductions on selected items. Detailed purchase data is transmitted to a central computer.

Choose The Right One, And You'll Earn 10% Toward A New GM Vehicle.



Depend on Junior's Garage and Diner for parts and service

Earn nothing toward a new GM vehicle when you use another card

No earnings — period

Staffed with Junior's buddies

Good times are guaranteed

Gives you double cheese at no extra charge

Has annual picnic

Junior counts your cash over and over

A member of the family

Depend on your Accelerated Earnings Network℠ GM Dealer for parts and service

Earn up to 10% toward a new GM vehicle when you charge your parts and service on The GM Card℠*

No cap on Additional Earnings**

Staffed with trained and certified GM technicians

Genuine GM Goodwrench parts are guaranteed

Gives you more bargaining power on a new GM vehicle

GM MasterCard® has no annual fee

10% earnings count over and above your best deal on your next new GM vehicle

A member of the Accelerated Earnings Network

ACCELERATED EARNINGS NETWORK

GM The GM Card

To apply, call 1-800-8GM-CARD.

*Offer is redeemable as discount on new GM car or truck. Up to $500 per account year, or maximum of $3,500 over 7 years. May be combined with other GM offers. Subject to GM Card Rebate Program Rules. Additional Earnings good on non-warranty retail parts and service at participating GM Dealers only. Excludes body shop repairs. **Additional Earnings are an extra 5% when you use The GM Card at Accelerated Earnings Network Members. ©1994 General Motors Corporation.

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*Source: Lipper Analytical Services, Inc. for the period 5/6/82 through 12/31/93. **Source: Lipper Analytical Services, Inc. Returns would have been lower if the advisor had not waived certain fees in the periods covered. Morningstar is an independent publisher of financial information and mutual fund ratings. Morningstar ratings are calculated 60% from 5-year, and 40% for three year average annual returns, with appropriate fee adjustments and a risk factor that reflects fund performance. The Morningstar analysis for Total Return Trust is through 11/12/93. The S&P 500 is an unmanaged index of common stock prices. Its returns include the reinvestment of all capital gains and dividends. Results are historical and do not indicate future performance. *Please read the prospectus carefully before investing or sending any money.*

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Free fact kit shows 20 money-making ways this sales tool can revitalize *your* selling efforts. Call 1-800-333-8036 or mail name and address to CorpTech, Dept BSW, 12 Alfred Street, Woburn, MA 01801.

When you give blood you give another birthday, another laugh, another hug, another chance.

American Red Cross

Please give blood.

Ad Council

to heavy coffee buyers who regul[ar]ly purchase premium brands of other go[ods]

Even more exciting to the packa[ged] goods suppliers is the ability to cr[eate] their own categories. Beech-Nut, a r[ival] er of baby foods, has used the Vons[Club] mailer to identify every household [that] has purchased a baby product for [the] first time in the preceding eight we[eks]. Says Widham: "This program ena[bles] me to target an offer specifically [to a] consumer based on the type and q[uan]tity of a product they buy, the freq[uen]cy they buy it, and whether they [buy] my product or my competitor's." Un[der] consideration, she says, is a 50¢-off [cou]pon—to hold on to Beech-Nut cust[om]ers—and a $1-off coupon for Ger[ber] Products Co. customers, to get the[m] switch brands.

PROMOTIONAL VEHICLE. Next, Vons p[lans] to bring target marketing—or datab[ase] marketing, as it's often called—right [to] its stores. Last year, it bought a 6[%] stake in Advanced Promotion Techn[o]gies Inc. (APT), a Pompano Beach (Fl[a.]

Under consideration at Beech-Nut: A $1 coupon fo[r] Gerber shoppers—to enti[ce] them to switch brands

startup that has developed a mach[ine] that displays video commercials [and] prints coupons in the checkout lane[s]. A similar system is being sold by Cata[lina] Marketing Corp., but it prints coup[ons] only in response to what gets scan[ned] during checkout. APT can determine [dis]counts according to demographic [or] past-purchase data. Once a shopper [is] identified by a Vons card, the syst[em] will look up his or her purchases [a] week ago and automatically determ[ine] for example, if it's somebody who's [el]gible for a buy-two-get-one-free spe[cial] Vons will start putting APT gear in [the] 346 stores later this year.

That, however, will require a n[ew] round of VonsClub cards. And this t[ime] they won't be so simple: Each will [con]tain a memory chip to store such [data] as the cardholder's birthday and [how] much he or she has spent over the [past] month. "We're betting that at the end [of] the day, this will be a powerful prom[o]tional vehicle and replace a lot of [the] paper coupons," says Michael F. Henn, [ex]ecutive vice-president. It may even m[ake] life easier for many boys and girls [who] deliver the Sunday papers.

By Larry Armstrong in Arcadia, Ca[lif.]

AMEN YANG

The 1994 *Business Week*
Forum of Chief Financial Officers

MAKING $ENSE OUT OF CHANGE

THE LEAP OF FAITH

Change drove William F. Malec to jump from the roof of Knoxville's twelve-story TVA tower. But it wasn't an act of desperation; it was a jump for joy. When Malec became Chief Financial Officer of the federally-administrated Tennessee Valley Authority in 1989, it was a bumbling bureaucracy of 37,000 employees and 13 management layers. TVA customers had endured 22 years of annual rate increases averaging 10.4%.

By 1994 TVA had reduced the workforce to 18,500, eliminated eight management layers, and put a ten-year freeze on rates. As CFO, Malec played a key role in the transformation. His tethered, super-hero descent from the top of TVA headquarters was a hair-raising effort to shatter old perceptions of management and show employees 'This is not your father's TVA.'

Malec is an example of Chief Financial Officer as corporate change agent. And he is not alone. At the 1994 *Business Week* Forum of Chief Financial Officers, Malec and more than 100 of his peers convened to discuss how they are reaching across corporate functions to add value to the corporation.

"CFOs must ask themselves 'Are we going to continue to operate as a support function, or will we transform finance to become an integral, cross-functional member of the business team?'" explains David Dungan, KPMG Peat Marwick's partner in charge, Finance Transformation practice.

TAKING THE LEAD

Pete Bassi, Taco Bell's Chief Financial Officer, chose the latter. "The most important thing a CFO can do today is to provide added personal value at the executive level."

At Taco Bell that happened by necessity. Prior to 1988, the business was a top-down, command-and-control organization. Cost increases were routinely passed on to the customer, until the customer revolted. Taco Bell reengineered, rolled back prices to the levels of the previous decade, and hasn't moved them since.

Throughout the reengineering, Bassi did much more than count beans. Taco Bell CEO John Martin put Bassi in charge of

major non-finance initiatives. That kind of delegation is now the rule. "Today if a CFO is responsible only for the numbers, he probably isn't providing the kind of broad-based expertise that his organization needs."

WHY ME?

Though it's often the CEO who writes the script for corporate change, it's the finance function that is cast as the main protagonist.

KPMG's Dungan explains, "Finance can most effectively launch corporate transformation for three reasons – it can reach the greatest number of touch points within the corporation, redefine the performance measurement system through its information-supply responsibility, and educate business users on the financial impact of every decision on the bottom line."

> The recovery that no one believed in, the so-called jobless recovery that was so widely discussed in 1992, has now become the recovery that everybody believes too much in. This economy has already slowed down.
>
> ROGER E. BRINNER
> EXECUTIVE DIRECTOR, CHIEF ECONOMIST, DRI/McGRAW-HILL

That's the conclusion the finance division of Hallmark Cards came to. "We decided finance should serve as an example of driving out business costs, and redirecting resources to higher-value activities," says Hallmark Cards Director of Finance and Planning-Asia Pacific Ed Place.

As at many companies, Hallmark felt finance was underutilized, with low-value, transactional processes receiving a disproportionate share of resources. So Place and his team began to leverage technology to liberate minds from the tedium of "transaction" processing, and consolidated redundant functions. Now the resources committed to the higher-value, decision-making support needed for business transformation are being increased.

> It's a question of leadership and of becoming a true business partner. CFOs must ask themselves 'Are we going to continue to operate as a support function, or will we transform finance to become an integral, cross-functional member of the business team?'
>
> DAVID N. DUNCAN
> PARTNER-IN-CHARGE, FINANCE TRANSFORMATION
> KPMG PEAT MARWICK

PEOPLE WHO NEED PEOPLE

Bob Weber is a card-carrying change agent. In his wallet, the Group Controller for Motorola's Automotive, Energy and Controls Group carries a card outlining the company's renowned people culture. It vows responsibility for total customer satisfaction, constant respect for people, and uncompromising integrity. Weber credits that respect for people with the uncommon ease with which Motorola accepts change. "If people feel that change is negative, they will resist. If people feel it's positive, they will accept change as part of what they do every day."

In 1987 Motorola's CEO set a goal to close the books in four days – a task on which most companies spend weeks. "I think he picked the close because it's legendary and highly visible. Meeting that goal built confidence, momentum, and an atmosphere of change." Today, Motorola closes the books in two days.

> The first state that builds a system that looks like the successful enterprises in our country will be the state where prosperity will reign for a long time.
>
> JOHN ELLIS BUSH
> REPUBLICAN GUBERNATORIAL CANDIDAT
> STATE OF FLORIDA

CHANGE BEGINS IN THE MIND

A people culture was not part of the deal when Executive Jet Chief Executive Officer Richard Santulli purchased the company in 1984. Executive Jet was a rigid, top down, driven culture. So he reengineered – eliminating manageme layers, organizing people into working teams, fostering open communication, and creating an entrepreneurial environment.

"When we had to redefine our vision, we relied on our peo – they knew the business and their own capabilities best." Wit the entire organization thinking, commu cating, and working as a team, Santulli a Executive Jet created a totally new conce in executive transportation, NetJets®.

The idea is simple: owning an airplan is often cost prohibitive; sharing an airpla is inefficient. NetJets offers the best of both: a fractional ownership program tha guarantees availability 365 days a year. The customer pays only for time on the airplane. The growth of the NetJets conc has been phenomenal and the entrepreneurial spirit thrives.

Relying on people and overcoming th human barriers to change are the keys to successful reengineering, according to Geo Bennett, Chairman and CEO of the reeng neering-consulting firm Symmetrix, Inc. "Those who are reengineering successfull are making psychological plans; they und stand that there are psychological barriers go over as change is implemented. To win management must spend as much time do psychological plans as doing task lists."

> When we had to redefine our vision, we relied on our people – they knew the business and their own capabilities best.
>
> RICHARD T. SANTULLI
> CHAIRMAN AND CEO
> EXECUTIVE JET INTERNATIONAL

CFOs LOOK INTO THE FUTURE

CFOs and shareholders have long understood the importance of financial gauges to measuring

rate performance. But measuring the value of holistic fac-
ke people cultures, effective management vision, and open
unication is not as straightforward. Convincing shareholders
ese measures effect the bottom line is more difficult still.
ion Carbide Principal Financial Officer Gil Playford argues
: Dow Jones 30 leader in 1991; share price appreciation lead-
992 and 1993; a tripled share price in little more than two
Playford goes beyond the terrific numbers to tell share-
rs how management achieved such success – by empower-
ch Carbide employee to create shareholder value.
e company has given employees reason to do so – its profit-
g plan is linked to return on capital. The plan keeps salaries
low those of peer companies for a chance to earn up to 40
xtra pay.

TA is symbolic
e important
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l trade in
Jnited States'
e.

E NEWQUIST,
MAN,
NTERNATIONAL
E COMMISSION

LET IT FLOW

The next phase of economic expansion will require enormous amounts of capital at low cost as corporations reinvest to replace facilities. "Successful companies," says Don Mitchell, Chairman of Mitchell and Company,"will be those which reduce their cost of capital versus their competitors' while creating access to more capital.

l will become the primary form of
ss competition."
is becoming more and more impor-
AT&T Capital Corporation Chairman
EO Tom Wajnert attests, "for corpo-
s to increase their flow of capital, not
o satisfy shareholders and prospective
ors today, but to finance investment
ansion tomorrow."
FOs will need to find new ways of
g capital available for higher-value
ne option is to lease equipment and
s rather than purchase them. Leasing
lp corporations focus on growing
siness and avoid tying up capital with
nent and systems that quickly obso-
nd lose value."

ENTATIVE MEDICINE

ny assessment of corporate well-being would be incomplete without taking into account the cost of its care benefits. Though it's uncertain hat debate will be resolved, Howard k, Celtic Life Insurance President says CFOs can rely on one fact – the change will be fundamental.

"Americans want guaranteed access to health insurance, lower premiums, equitable rating structures, and freedom from fine print." Wayne Lowell, CFO, PacifiCare, forecasts that, for large corporations, managed care will be a significant part of the solution.

Lowell says CFOs can act *now* to reduce their health care costs. "Partner with health care organizations that have incentivized the doctor to keep costs down; keep administrative costs low by choosing a provider with a broad array of products; and make employees accountable for the unnecessary higher-cost choices they make."

Milliman & Robertson CEO and President Robert Collett says, "It's no longer sufficient for employers to adopt a wait-and-see attitude toward health care reform. They should continue to expand their implementation of the managed health care features in their own plans while monitoring and influencing developments in proposed health care reform legislation."

We are living in a world in which there is a tremendous concern about the reacceleration of inflation. Not credible. Rapid growth does not necessarily cause rapid inflation.

WILLIAM WOLMAN
CHIEF ECONOMIST,
BUSINESS WEEK

It is important for corporations to increase their flow of capital, not only to satisfy shareholders and prospective investors today, but to finance investment for expansion tomorrow.

TOM WAJNERT
CHAIRMAN AND CEO
AT&T CAPITAL CORPORATION

It's no longer sufficient for employers to adopt a wait-and-see attitude toward health care reform. They should expand implementation of managed health care features in their own plans while monitoring and influencing developments in legislation.

ROBERT COLLETT
PRESIDENT AND CEO
MILLIMAN & ROBERTSON, INC

DON'T STOP THINKING ABOUT TOMORROW

Perhaps of even greater peril than health care for millions of aging Americans is the coming pension debacle. Dallas Salisbury, President of the Employee Benefit Research Institute says, "CFOs must not only make good on the retiree benefits they've already promised, they must finance pensions, medicare, and social security for the years to come."

Salisbury sees alarming structural flaws in current corporate retirement benefit programs – lack of voluntary participation, low level of contribution, erratic regulations and tax rules, and a dangerous frequency of unfunded pensions.

Jerry M. de St. Paer, CFO and Executive Vice President, The Equitable Companies, Inc., says the solution lies in a national retirement policy. "The problems won't go away until we expand coverage through private pension systems, implement coherent, consistent tax policy; and coordinate private pensions, social security, and other benefits to enhance retirement income."

But until that happens, Milliman &

MANAGING CHANGE (And A Whole Lot More)

Keen insights into the attitudes of the CFOs of America's largest corporations were gleaned at the 1994 *Business Week* Forum of Chief Financial Officers. Responding instantly and anonymously via Quick Tally Interactive Systems, 90% of the Forum's more than 100 CFOs report that their role within the corporation is changing markedly, 94% saying it has become more complex. Most CFOs (93%) recognize that their responsibilities are broadening, and 70% admit that they needed additional training to execute their new responsibilities.

Successful reengineering efforts are reported by the majority of CFOs: 82% say that downsizing has led to bottom-line results. To achieve that success, 97% stress the importance of communicati a clear vision for reengineering to every member of the company.

Regarding the crucial issue of health care reform, 66% feel that fundamental changes to the country's health-care delivery systen are necessary while 30% believe that the current system requir only minor changes. When asked if they think Congress should approve President Clinton's health care reform plan, only 7% feel the plan should be passed as is; 40% would suggest passage after major changes; and 50% would reject it outright.

In-hall audience polling at the 1994 Business Week *Forum of Chief Financial Officers provided by Quick Tally Interactive Systems of Beverly Hills, CA.*

Robertson's Collett suggests corporations begin to sort out health care and retirement benefits on their own. "Employers must look 10-20 years hence to determine the adequacy of their employees' pensions funds, and must actively campaign for a comprehensive retirement policy."

NEW TOOLS OF THE TRADE

With one eye on the future and the other on the bottom line, CFOs need to anticipate and manage risk more carefully than ever. Fortunately, whatever risks corporations face in the course of day-to-day business, for the first time there are ways for them to measure, quantify, evaluate, price, and, yes, manage them.

"Business can finally choose which risks to run and which not," explains Jerome Powell, Managing Director, Global Investment Banking, Bankers Trust. Powell specializes in a new mode of risk management that allows businesses to disaggregate risk – breaking it up into component parts, pricing each aspect, and selling the parts to those in the economy who want to take them.

"Corporations no longer have to take risks they don't want. If they are still doing so, capital is being inefficiently allocated." Powell says that by using derivative products to analyze, capture, and reduce risks, corporations can manage them, and free-up capital for higher uses. "As CFOs look into the future, these tools will become part of the basic kit of corporate strategy and management."

New finite insurance products provide additional new ways for CFOs to manage risk. Finite insurance offers financial benefits for corporations, allowing them to better stabilize risk and affording them coverage that otherwise might not be available. "We're looking for w in which clients can buy predictability over time and find w to reduce the overall cost of the risk," says AIG Risk Manageme President and COO John Gantz.

"In guarding against difficult-to-place risks like professior environmental, or umbrella-liability exposures, finite produc can be used to stabilize insurance costs, provide broader pro tion, and afford off-balance-sheet financ

AIG has been an innovator in stabiliz insurance costs. In the area of workers' compensation, AIG has done so by ince tivizing the reduction of claims frequenc Instead of rewarding claims administrat on the basis of the number of claims processed, AIG focuses on the reducti of claim costs through better investigati and management of cases. The result is a unity of interest between the provide and the insured – the provider profits only when the insured profits.

To guard against difficult-to-place risks, like professional, environmental, or umbrella-liability exposures, finite products can be used to stabilize insurance costs, provide broader protection, and afford off-balance-sheet financing."

JOHN G. GANTZ
PRESIDENT, COO
AIG RISK MANAGEMENT, INC

Derivatives can help companies package, and redistribute risk in a way that increases and frees up capital for higher uses. As CFOs look into the future, these tools will become part of the basic kit of corporate strategy and management.

JEROME H. POWELL
MANAGING DIRECTOR,
GLOBAL INVESTMENT BANKING
BANKERS TRUST

POISED TO PROFIT

Making "$ense" of the change under way in business takes uncommon mix of leadershi financial expertise, business acumen, a courage. As the primary trustee of cor rate value and a critical member of the senior management team, today's CFC master of that mix.

Though the strategies they choose v the themes are universal: CFOs are low ing costs, simplifying processes, changi corporate culture, and adding value acr the board.

Written by Martin A. Keohan, a Boston based business writer.

evelopments to Watch

BY EMILY T. SMITH

ANGE YOUR OIL RY 250,000 MILES

The internal combustion engine has created its own oil crisis. Because the oil in cars and trucks must be changed every 3,000 to 20,000 miles, respectively, billions of gallons need to be disposed of each year. Now, though, engineers at Florida-based TF Purifiner Inc. have devised a system that cleans oil so thoroughly it hardly ever needs changing.

e canister-shaped system is connected to the engine's oil ure sending unit. Engine oil first flows slowly through a ceable cotton filter that removes particles ¼ to ⅟₂₅ as as those taken out by conventional filters. Then the oil ated to 195F, driving off contaminants such as fuel and :. Early customers such as the Wichita repair shop for n Chemicals' truck fleet report that trucks equipped the system can go more than 250,000 miles with nary an ange; just add oil when the engine runs low. California's onmental Protection Agency intends to grant the $270 fil- ne of its first seals of approval.

SH! INTEL'S CHIP S SOME ZIPPY COMPETITION

l Corp. is the world leader in advanced memory chips t retain data for long periods, even when the power is hed off. This year, it will sell at least 60 million so- flash memories. But flash now faces a challenger—a new of chip that performs the same trick, rewrites data fast- id consumes less power.

e new ferroelectric random-access memories (FERAMs) information as tiny dots of ceramic film deposited on sil- The dots are switched on by a faint electric field. Unlike ar dynamic random-access memory (DRAM) chips, which re constant refreshing, FERAM films remain polarized a reverse voltage is applied, which cuts power con- tion. Earlier this year, Matsushita Electronics Corp., ing with Symetrix Corp. in Colorado Springs, Colo., an- ed FERAMs that can rewrite data 50 times faster than chips, using one-sixth as much electricity. In May, the a-based giant licensed the technology to Motorola Inc., wants to use it in handheld radio equipment. Another ado Springs startup, Ramtron International Corp., which ed similar devices with Hitachi Ltd., has received large s from gamemaker Sega Enterprises Ltd. Hitachi esti- s that FERAM chip sales will exceed $600 million by 1996.

AT ARE LITTLE MOLECULES MADE OF? S MICROSCOPE KNOWS

entists trying to look at some of nature's smallest objects ave had to make a tough choice: They can use an atom- ce microscope (AFM) to see molecules and even atoms—but not their chemical composition. Or they can use nuclear magnetic resonance (NMR) imaging to see inside much larger objects and materials to determine their makeup.

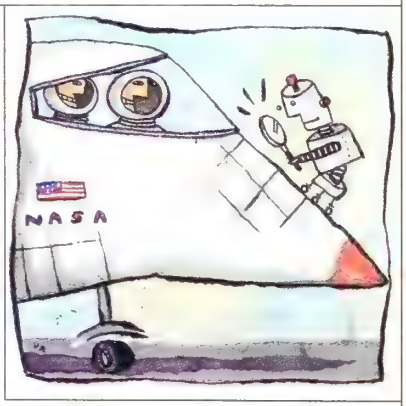
This either-or game may soon be over: Research manager Daniel Rugar at IBM's Almaden Research Center has developed a hybrid "magnetic resonance force microscope" that can both image and analyze the chemical makeup of molecules as small as 2.6 microns wide—⅟₁₀ the width of a human hair. That's 100 times better than NMR. The device uses NMR to make the nuclei of atoms in a sample vibrate. The vibration reveals the structure and makeup of the molecules. Rugar hopes to improve the microscope's resolution so that single atoms could be analyzed. The MRF has commercial potential as a tool to help develop more precise drugs and to control more precisely materials used to make computer chips.

A WHOLE LOT OF POWER IN A LITTLE BIT OF POWDER

Metallic hydrides are amazing. The powders, made from blends such as nickel and lanthanum, can store lots of hydrogen at room temperature and pressure. Scientists have begun to exploit them in products such as nickel metal hydride batteries for laptop computers. Going a step further, Ergenics Inc., a startup in Ringwood, N. J., plans to use metallic hydrides for a panoply of products, including a new type of battery that might power electric vehicles.

The Ergenics battery resembles the long-lasting nickel-hydrogen batteries used in satellites and spacecraft. The main difference is that the hydrogen is stored outside the battery in tubes containing metallic hydride, instead of as a pressurized gas inside the battery. The design should make it cheaper than satellite batteries and longer-living than conventional nickel metal hydride batteries. Ergenics aims to complete a 3-kilowatt-hour unit within a year, and a 30-kwh unit, big enough for an electric car, by late 1995.

A ROBO-DERMATOLOGIST FOR THE SPACE SHUTTLE



The space shuttle would burn up as it reenters Earth's atmosphere if it weren't for the heat-resistant tiles that cover its aluminum skin. Some 17,000 of the tiles on the shuttle's lower surfaces are made of silica that must be inspected and waterproofed before each mission—a task now done piecemeal over several months.

Researchers at Carnegie Mellon University expect to speed up the process with the Tessellator, a robot that inspects and waterproofs the tiles. The robot divides or "tessellates" its task among uniform work spaces, using a camera to locate each tile. By comparing the condition of the tile with data on its state at earlier inspections, the steel inspector identifies flaws better than the human eye. By using this efficient work pattern, the robot can complete its task in just a few eight-hour shifts. Engineers expect the new tile inspector to be on the job at Kennedy Space Center within a year.

VALA KONDO

SUDDENLY, NUMBER THEORY MAKES SENSE TO INDUSTRY

A math once used for head games, it proves to have many indispensable applications

Neil J. A. Sloane has spent much of the past two decades contemplating the best way to stack oranges on a fruit stand. He isn't a grocer with an obsession for order but a researcher at AT&T Bell Laboratories who specializes in a major branch of mathematics called number theory. That means he doesn't look at numbers the way most people do.

To many of us, for instance, computer data are just characters on a screen. To programmers, they're the ones and zeros that represent information. Sloane chops these streams of ones and zeros into chunks and turns them into points in space. Around each one he draws an imaginary sphere, like an orange. Then, he rearranges his oranges to find ways of stacking them closer together. Just recently, Sloane's exercise led to a practical advance: He invented a way to squeeze so much more data into a computer program that it promises to slash the cost of transmitting data more than 10%, without compromising reliability, accuracy, or speed.

MORTGAGE MIGRAINE. This kind of something-for-nothing gain is typical of the rising impact that number theorists are having in industries as diverse as computers, communications, agriculture, and pharmaceuticals. Simply by juggling numbers, they are coming up with better ways to encrypt information and crack codes. They're also devising shortcuts to solving problems once thought too complex to compute quickly—everything from figuring the value of mortgage-backed securities to calculating precisely the right mix of ingredients for chicken feed. And they're helping engineers slash the cost of testing industrial processes to make sure they'll work just right. "People have always thought of number theory as the purest form of mathematics," says Ronald L. Graham, a Bell Labs mathematician. "Now, it is the most applied of all."

Number theory, which is simply the science of inventing new ways to manipulate whole numbers, originated in ancient Greece. For centuries, it provided grist for intellectual games, but little in the way of better mousetraps. That is, until the advent of computers that communicate in the language of whole numbers. The spread of ever-more-powerful computers and networks raises possibilities—and poses daunting challenges—that only number theory can address.

Take derivatives, financial products whose value is tied to fluctuating financial indicators. Mathematically, pricing derivatives is as big a challenge as landing a Space Shuttle. In fact, clients of investment banks often have to wait overnight to get a quote on what it costs to invest in a derivative such as collateralized mortgage obligations (CMOs), whose value is linked to mortgage interest rates. And that calculation can be obsolete in an instant if rates change. The problem is that calculating the value of each share in a pool entails solving an equation with many variables, such as thousands of monthly mortgage payments and data on how rapidly people refinance or pay off mortgages. T figurings require millions of calculat that tie up computers for hours.

That's why Goldman, Sachs & Co. other investment firms took notice v number theorist Joseph F. Traub fou shorter way of calculating derivati which are based on so-called "m dimensional integral" equations. Trau professor of computer science at Columbia University, can approximate a solution for these equations solving a tiny subset of all the ments—only 10,000, vs. 1 million o for previous techniques. In tests on Street, a program developed by on Traub's graduate students, Spassimi Paskov, has calculated the price of up to 100 times faster than the me Goldman was using, Paskov says. G man won't discuss the trial, but bank reports similar results. The gram could apply to other complic financial products, and Paskov alre has one job offer and expects others fore he finishes his PhD in the fall.

NUMBER THEORY GETS PRACTICAL

Number theory, once the esoteric study of what happens when whole numbers are manipulated in various ways, is becoming a vital practical science that is helping solve tough business problems. Here are some of the ways:

ding theory, one of several branch- number theory, is the key to an- advance: new methods of transmit- omputer data efficiently and free of (table). Errors—unintended chang- the data—seem inevitable during mission. Coding technology pre- them by crunching sequences of with an algorithm, a step-by-step ss for manipulating numbers that is to add a few extra ones to the sequence. Upon receipt, these extra ers are used to check the rest of equence to make sure it was trans- d correctly. If not, the transmis- s repeated.

CONVERTS. Trouble is, the early ods for doing this have become ob- , thanks to faster transmission and types of interference peculiar to ess and cellular systems. So "there een a renaissance in coding theory past five years as people realized the algorithms developed in the nd '60s are no longer sufficient," Bell Labs mathematician Jeff La- s. What's needed now are algo- s that overcome the new interfer- but don't require lengthy ations at either end of the trans- n. Neil Sloane achieved that goal is method for packing "oranges." It ed him to invent a code that keeps lculation at either end short, while g fewer extra numbers for each nce of data. That means he can ze 12.5% more data into a trans- n. Hughes Aircraft Co., whose re- ers also hit on the technique, plan ploit those savings by using the n communications equipment. e same mathematics also enable engineers to pare down the number of times they test industrial processes. To save money, engineers want to run as few tests as possible. But developing the best process requires finding the optimum combination of half a dozen or more variables—different chemicals and temperatures used in making silicon chips, for instance. Typically, engineers use mathematical formulas to figure out which combinations of variables they need to test. To speed up this effort, Sloane incorporated his packing mathematics into a computer program called Gosset. Using it, engineers can prove a process with 23% to 50% fewer tests, according to the Experiment Strategies Foundation, a Cleveland-based consultant in testing procedures.

Such results are winning converts: Novis International uses the program to come up with better mixes of chicken feed, Eastman Kodak to help produce the coatings on photographic film, and Monsanto in drug manufacturing. Annette Hagewiesche, a researcher at Genentech Inc., uses Gosset to help design tests of the ability of new processes to purify protein-based drugs, such as Activase or TPA. "It makes it much faster to screen different tests, which saves time and money," she says.

Number theory is a snoop's best friend. Today's state-of-the-art codes may have about nine months of privacy left

Number theory is also the basis for writing and cracking encryption codes, which make data unintelligible to electronic snoopers. Public encryption schemes use a system called RSA to encode messages. It involves feeding a message into an algorithm, which churns out the scrambled version. Inside each encryption algorithm is a number, called a modulus, that does the scrambling. Like a numerical blender, it produces gibberish.

The modulus is the Achilles' heel of RSA encryption schemes. A snoop intent on cracking the code must first factor the modulus—that is, find two prime numbers that, when multiplied together, produce the modulus. Since anyone with high-school math knows how to factor, the security of a code relies on making the modulus so large that an unrealistic amount of computer time is needed to calculate the two primes.

In April, though, number theorists Arjen K. Lenstra and his colleagues at Bell Communications Research Inc. made a leap in code-cracking. Using a recent and unusually efficient algorithm for determining prime factors, they broke a 129-digit code in just eight months. Since most encryption systems now use 155 digits, most data are still safe from theft for a while. But to test the limits of number theory, Lenstra's team intends to try a better code-breaking algorithm, called a number field sieve. He says it will take roughly nine months to crack 155-digit codes.

Mathematicians fear that even faster methods of factoring may soon be invented. Whether that happens will depend ultimately on whether there is a limit to how easily prime factors can be found. Most theorists believe that the number of steps it takes to find prime factors is inherently complex—that it will always grow exponentially with the size of the number. But no one knows for sure. "The complexity of factoring is key to encryption," says Enrico Bombieri, a mathematician at the Institute for Advanced Studies in Princeton, N. J. If factoring is inherently complex, small increases in the number of digits in the modulus would so increase the difficulty of cracking it that security could be protected. If not, says Bombieri, "someone could come up with a fast way of breaking all of the codes."

RANDOM MISCHIEF. While number theorists probe that possibility, they're also helping make computer simulations more accurate. Computer programs known as number generators spew out series of what are called pseudo-random numbers, which engineers, scientists, and econo-

RANDOM NUMBERS 5

of how to come up with hat can be used to simu- om events, such as the ot traffic through an airport termi- tists also use random numbers to oblems that are too complex to cisely, such as exactly how air r an airplane wing.

PRIME NUMBERS

heorists are increasingly obsessed ng up with quick ways of finding bers, which can only be divided lves or one and still yield a whole hese are the basis for, among other things, cryptography—encoding computer data to protect it from theft.

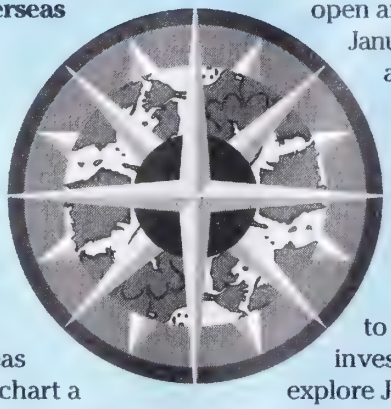
COMPLEXITY

To solve problems, mathematicians often invent algorithms, or step-by-step procedures, that are repeated many times until a solution pops out. Complexity theory is the study of how many times a given procedure must be repeated to get an answer. This is useful in designing software that will let computers do their jobs more quickly. 9

INFORMATION THEORY

This aspect of number theory determines how sequences of numbers can be best used to represent information. By coming up with new ways of manipulating these sequences, mathematicians are devising more efficient computer codes to transmit computer data with fewer errors or glitches. 4

EXPLORE OPPORTUNITIES ABROAD.



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mists plug into computer models to ulate random events. For instance, may want to check out the occurren calls on a telephone network to d mine how well a given network con ration handles various levels of tra Engineers also use random numbe approximate solutions to problems complex to calculate in a straigh ward way.

There's one hitch, however. A years ago, mathematicians realized the numbers coming out of these g ators weren't random: They formed inite patterns that could invalidate c lations or simulations. George Marsa a professor of statistics at Florida S University at Tallahassee, fell victim summer when his own random-nu algorithm was caught skewing the sults of experiments simulating the netism of materials.

To all appearances, says Persi D nis, a professor of mathematics at vard University, there was no around the problem. Then recently, R. K. Chung, a Bellcore fellow, hit

Number theory may be key to developing computers that mimic the human brain

a way of testing whether a serie numbers is truly random. While wor on better ways to find connections tween two points in a network, a ke designing efficient communications tems, Chung stumbled across a ma matical relationship between these works and random-number generat Her discovery could eventually imp the number generators, which, in t could help make computer problem- ing more reliable.

The continued manipulation of n bers promises more practical divide in the years ahead—in everything creating new materials to designing materials. Peter Sarnak, a professo mathematics at Princeton University cently concocted a technique that sh how to interconnect some 10 bi phone lines. It's far too complex to a to telecommunications networks. But perts speculate that the trick m come in handy for designing compu that mimic the human brain. As world goes digital, it seems, the mus of number theorists will only bec more relevant.

By Fred Guterl in Princeton,

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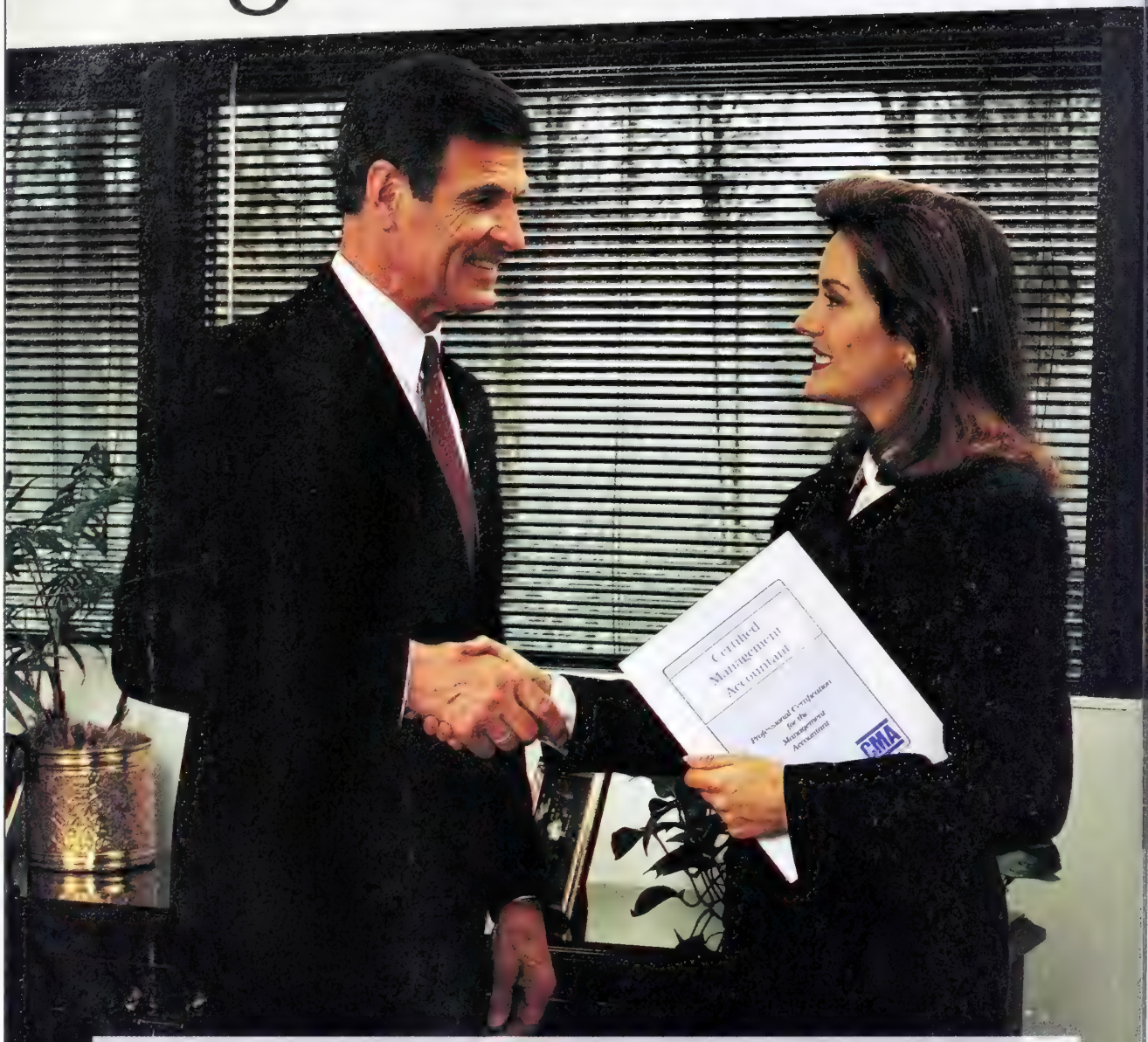

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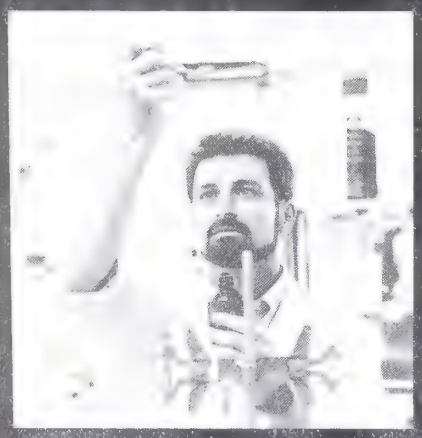

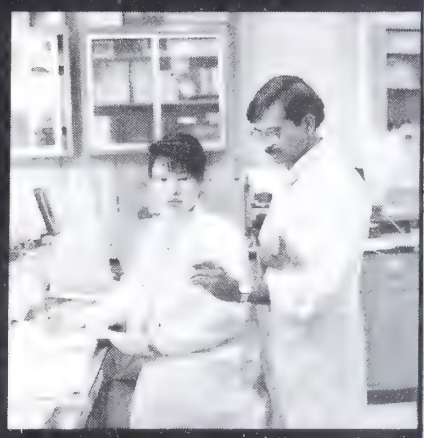

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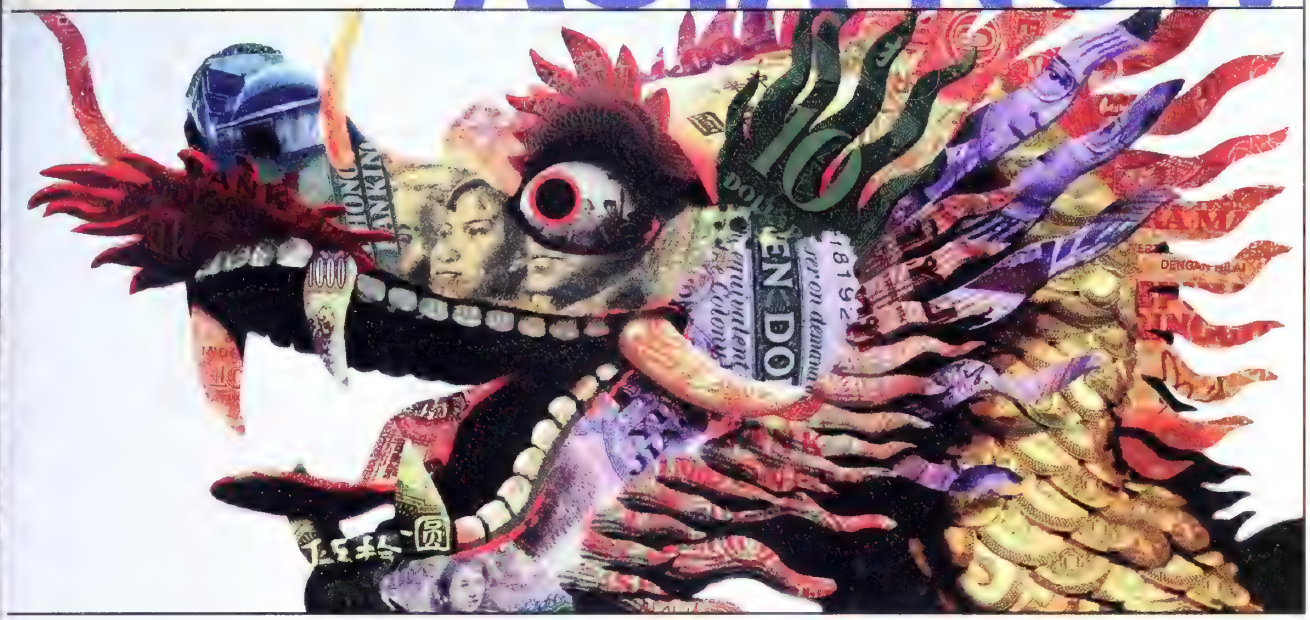

Illustration by Mick Wiggins As seen in BusinessWeek, November 29, 1993 Issue

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MORRIS AND ALL-4-ONE: SEEKING SMALL LABELS RUN BY EXECS WITH "MUSIC IN THEIR BLOOD"

ATLANTIC'S SWEET LISTENIN' GUY

Doug Morris revived it by taking risks, not crunching numbers

For the moment, Doug Morris seems spellbound. His eyes are closed, and his Italian loafers are propped up on the big mahogany desk in his office. On the stereo, the pop quartet All-4-One is crooning a remake of the country hit *I Swear*. Morris' head is swaying and a faint smile creases his bearded face. The 54-year-old chairman of Time Warner Inc.'s Atlantic Group plainly loves the song.

"I tell ya," says Morris, popping out the cassette and shaking it like a tambourine. "This song's gonna be a monster hit. Every wedding in America will be playing it this summer."

It wasn't so long ago that such a prediction would sound like folly coming from the Atlantic Group—a key unit of Time Warner's $4 billion music empire. Once a thriving record company full of such hot acts as Genesis and Crosby, Stills & Nash, Atlantic spent most of the 1980s languishing. Its reputation as Warner Music Group's penny-pincher crippled its ability to lure new talent. Instead, it milked sales from its catalog of greats and watched potential stars such as rocker Bon Jovi break off negotiations and sign elsewhere. "A lot of people were concerned about our future," concedes Ahmet Ertegun, Atlantic's 70-year-old founder.

Not anymore. Since taking over the helm from Ertegun four years ago, Morris has boosted Atlantic's revenues from $400 million to an expected $900 million by the end of this year. Part of that growth—about $150 million worth—is from expanding into exercise videos and audio books. But the bulk has come from returning Atlantic to the hit parade. Morris has recruited a group of young, trend-savvy music executives and encouraged them to take risks to find new talent. The result: The Atlantic Group has become a fixture on the Billboard 100 listing of current hits. Its 9.4% market share of new releases outpaces all of its competitors.

Of course, Atlantic still has its weaknesses. With the exception of Phil Collins, it lacks a major superstar and must rely instead on a steady stream of hits from newer, trendy acts such as rapper Snoop Doggy Dog. In the past few years, Morris has kept the stream flowing, but in an age when one makes and breaks stars virtually every night, reliance on new acts is chancy.

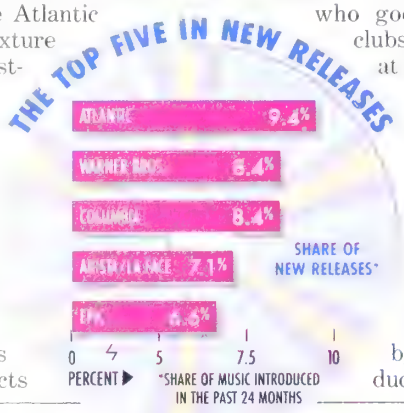
Nevertheless, Atlantic is clearly on a roll, and most attribute that to Morris, who stands out as a true "record guy" in an industry dominated by risk-averse bean-counters. "Until recently, this was a company that was doing very badly," says rival record mogul David Geffen, "and it was doing badly because it wasn't doing all the things that Doug is doing: signing labels, taking risks."

ARTISTS' RESPECT. Morris likes to think of himself as "bilingual"—he speaks the language of both business and music. "I've never been very successful at the creative part of the business," he says. "But I understand the thrill of hearing your song on the radio for the first time." During the '60s and '70s, Morris was both a songwriter (the Chiffons' 1966 hit *Sweet Talkin' Guy*) and a producer (Brownsville Station's 1970s hit *Smokin' in the Boys' Room*). That gives him credibility with artists. "It's easy for me to say 'What the hell do you know?' when record executives start to talk music," says Atlantic's Pete Townshend, co-founder of the Who. "I can't say that to Doug."

But Morris is also a solid manager, something Warner Music Group Chairman Robert J. Morgado recognized in 1990, when he picked Morris to succeed an aging Ertegun as active CEO. Long an Ertegun protégé, Morris had joined Atlantic in 1978 when he sold his tiny Big Tree label to the Warner giant. Although Atlantic floundered, Morris distinguished himself during the 1980s signing acts such as Townshend and former Fleetwood Mac vocalist Stevie Nicks.

When his chance came, Morris started creating and buying smaller labels. They're run by executives hand-chosen for the "music in their blood," Morris says. "I don't understand all the genres of music," he explains, "and at my age I'm certainly not going to be the one who goes to all the funk clubs where groups play at 12:30 a.m."

His first venture was East West Records, headed by former promoter Sylvia Rhone. She quickly discovered En Vogue, a hot women's R&B quartet. Next came Atlantic Nashville, run by country-music producer Rick Blackburn.



ed the company into one of the in-
's hottest segments. Danny Gold-
former manager of grunge super-
Nirvana, took over the flagship
tic Records label and recruited
um band Stone Temple Pilots.
cope Records, run by longtime hit
cer Jimmy Iovine, has scored big
Morris bought it in 1992 with
Doggy Dogg.

Morris's new team began to spend
y to develop talent, Atlantic lost
in 1992. "I was terrified about
I'd set in motion," Morris says. A
later, he insists, profits returned
ave been growing ever since (Time
er doesn't break them out). Re-
have been buttressed by Morris'
ition of Rhino Records, which does
er job of repackaging old hits than
tic did on its own. And Atlantic
rnered the market on fitness vid-
t dominates the business by pro-
g everything from the Jane Fonda
to *Buns of Steel.*

TO CHANGE. Morris likes to use
r-office terms such as "empower-
and "decentralization" to describe
le. But a bit of "micromanagement"
into play, too. Consider his deal-
with Tori Amos, Atlantic Records'
d-coming alternative pop soloist.
91, Morris asked to hear a demo
n of Amos' album, *Little Earth-
s.* Morris didn't exactly enthuse
he quiet and cerebral songs, which
costly to produce and seemed too
y for American listeners. In fact,
is was downright annoyed. "He
me up and said: 'Why are you
this?'" Amos recalls. Her belliger-
esponse: "Because I believe in it
every cell of my being."

rris hung up and listened to *Little
quakes* several times over. The
day, he called Amos. "I don't know
o tell you this," he said, "but I've
in love with your record. I really
now." He added, though, that it
d be introduced in London, which is
on new artists. *Little Earthquakes*
ne a hit there, creating a buzz, and
ually went gold in the U. S. Amos'
album, *Under the Pink*, promptly
platinum worldwide.

ries like that are why Atlantic has
ne Warner Music's fastest-growing
Insiders say its sales this year will
surpass those of flagship Warner
Records Inc. That has put Morris'
n the rise and has sparked rumors
he may soon move up to a bigger
t Warner Music Group. "Clearly,
has the talent to play a wider role
e future," says Morgado. Artists
as Amos, however, would rather
ay right where he is.

*Ron Stodghill II in New York, with
ld Grover in Los Angeles*

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[1] Data quoted represents past performance and assumes reinvestment of all distributions. Investment return and principal value will fluctuate, and redemption value may be more or less than original cost.

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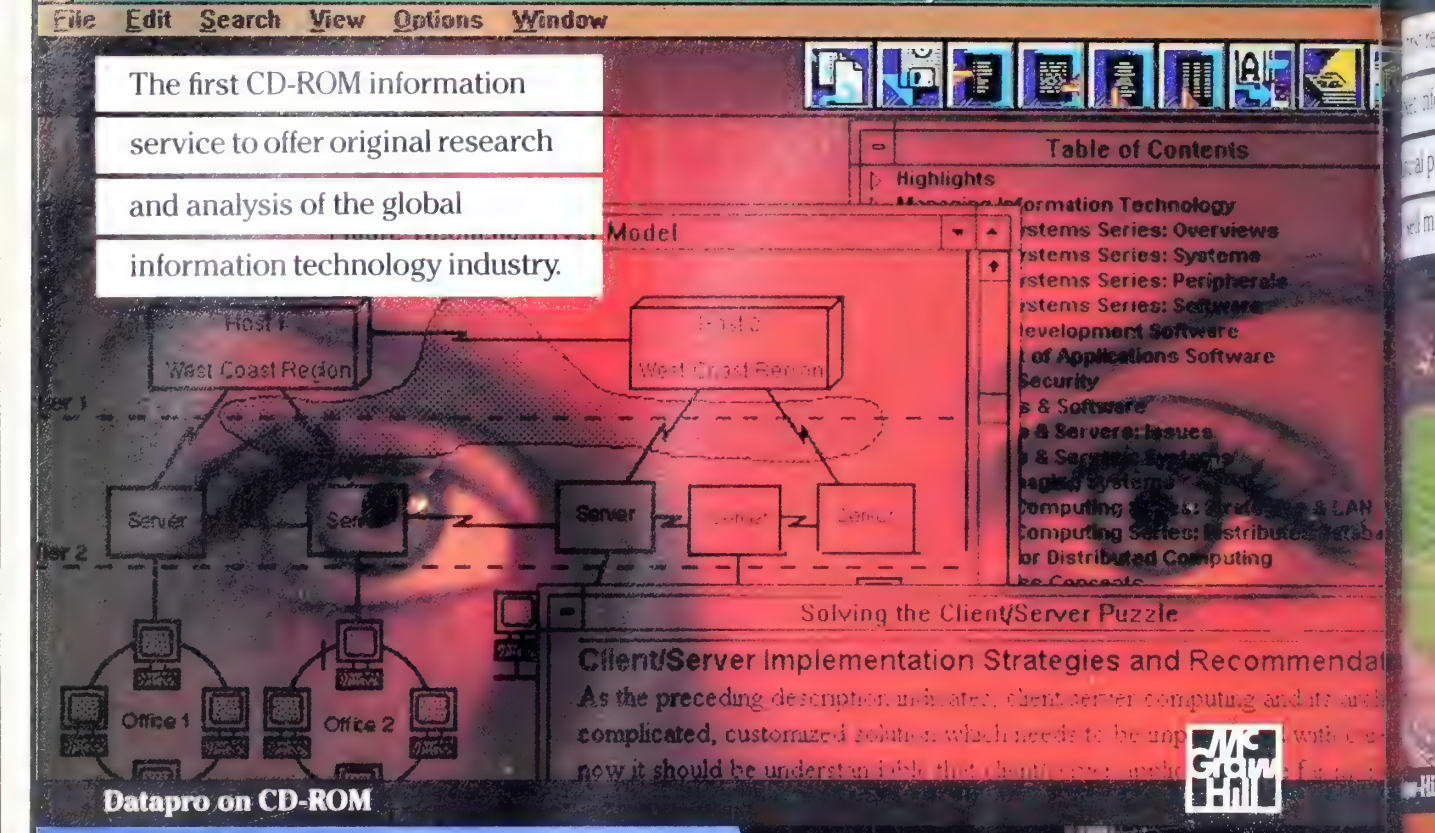
[3] The Standard & Poor's 500 (S&P) Index is an unmanaged group of stocks considered to be representative of the stock market in general.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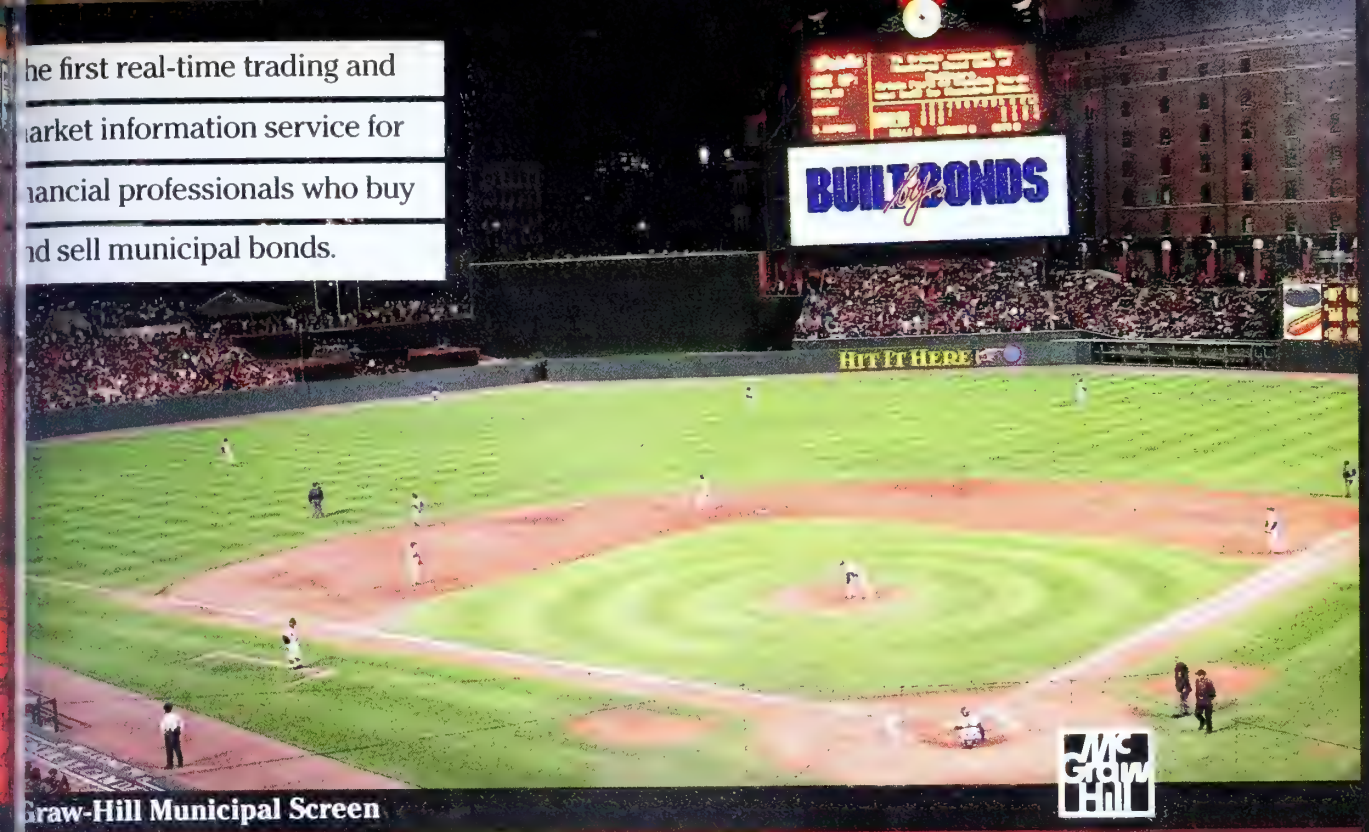

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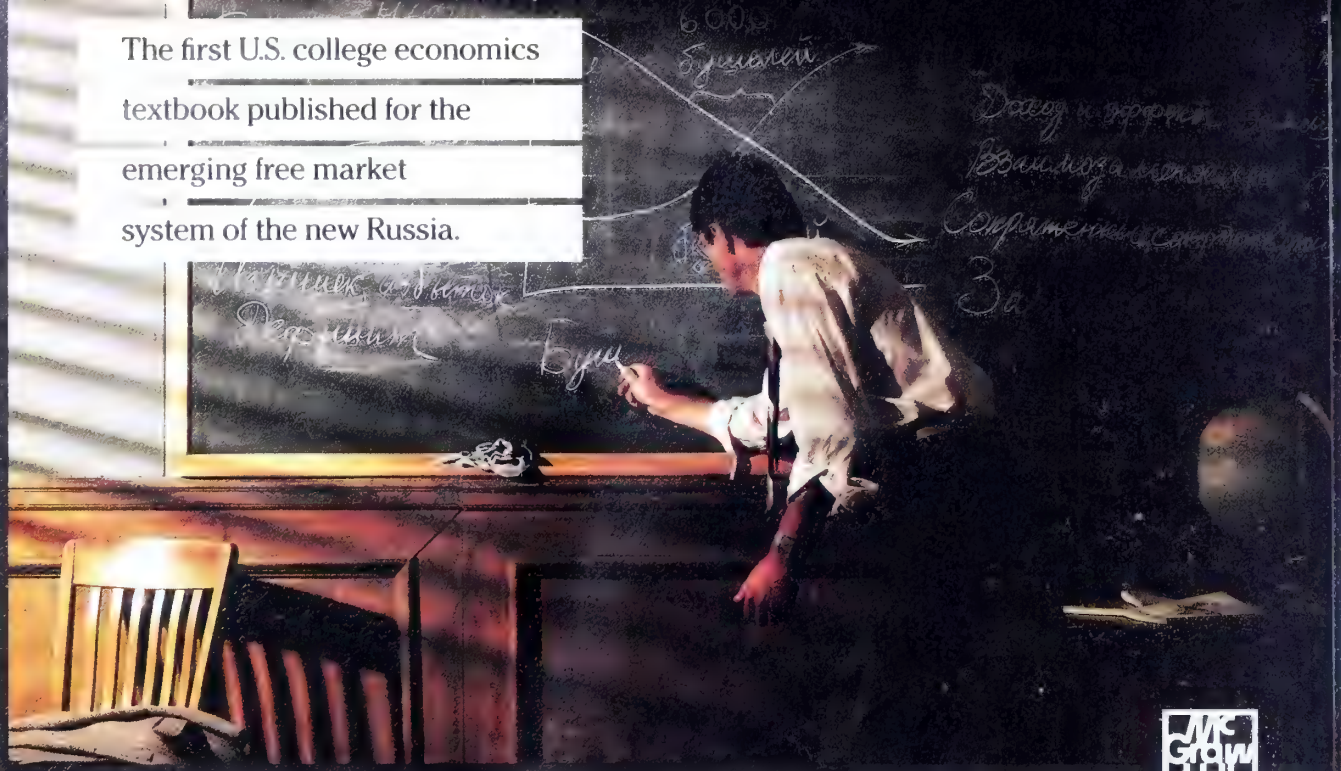

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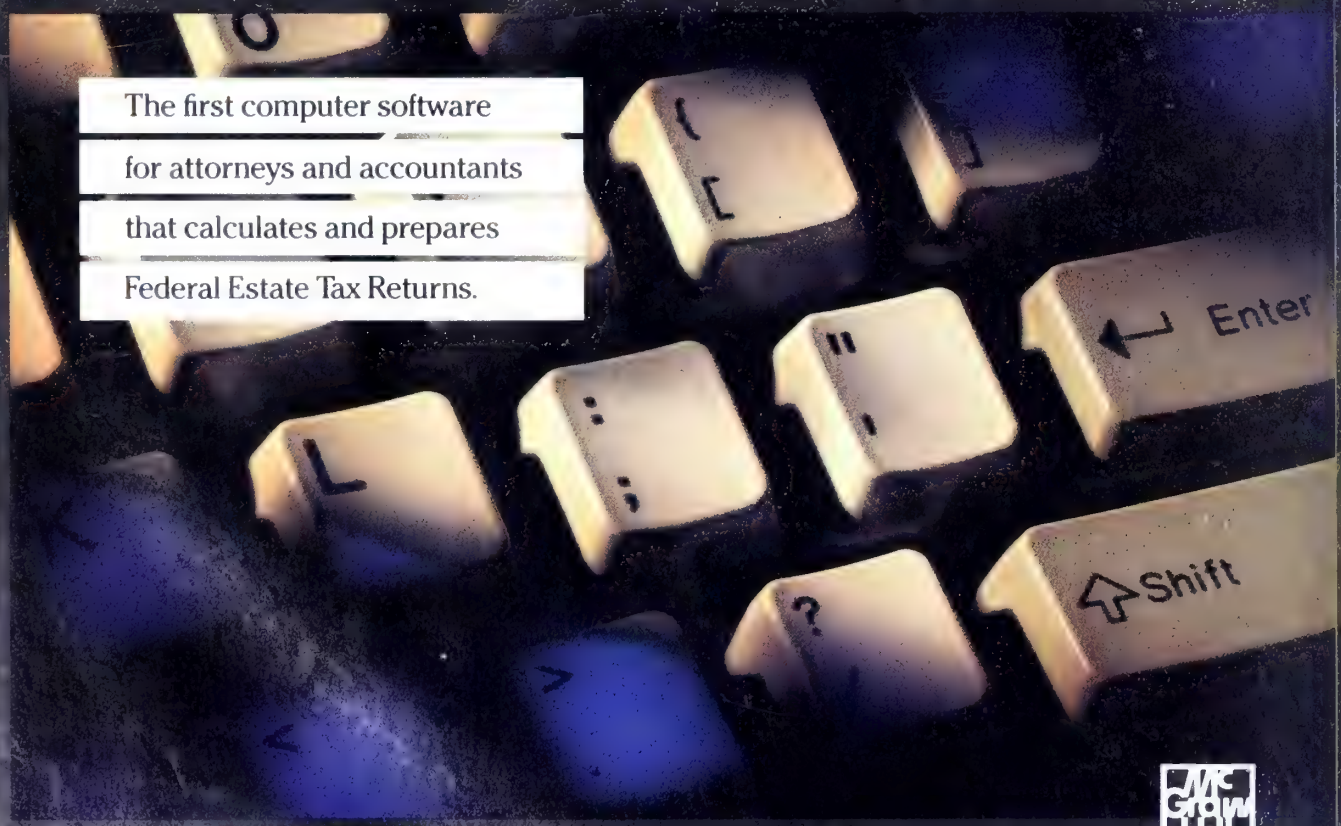

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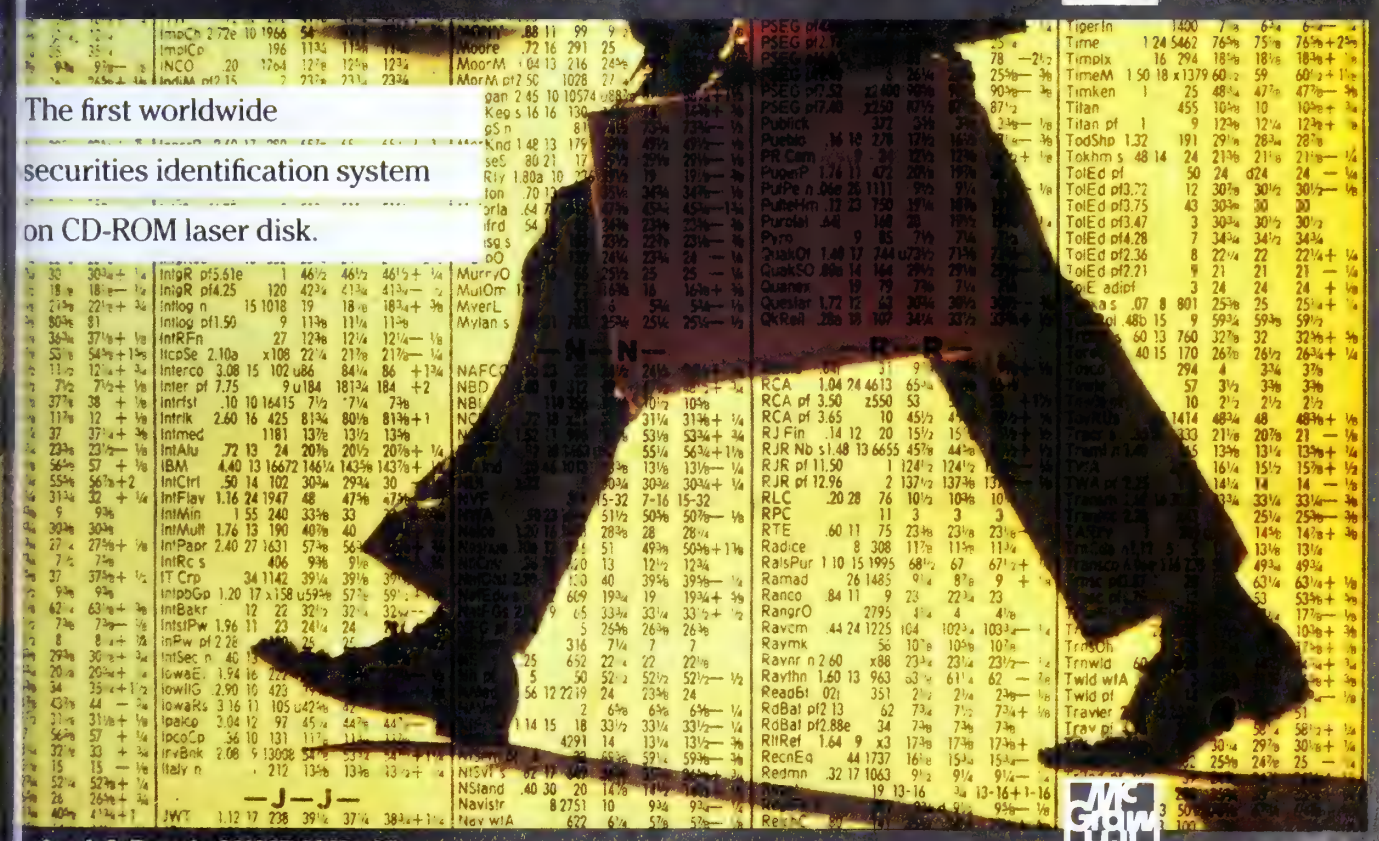

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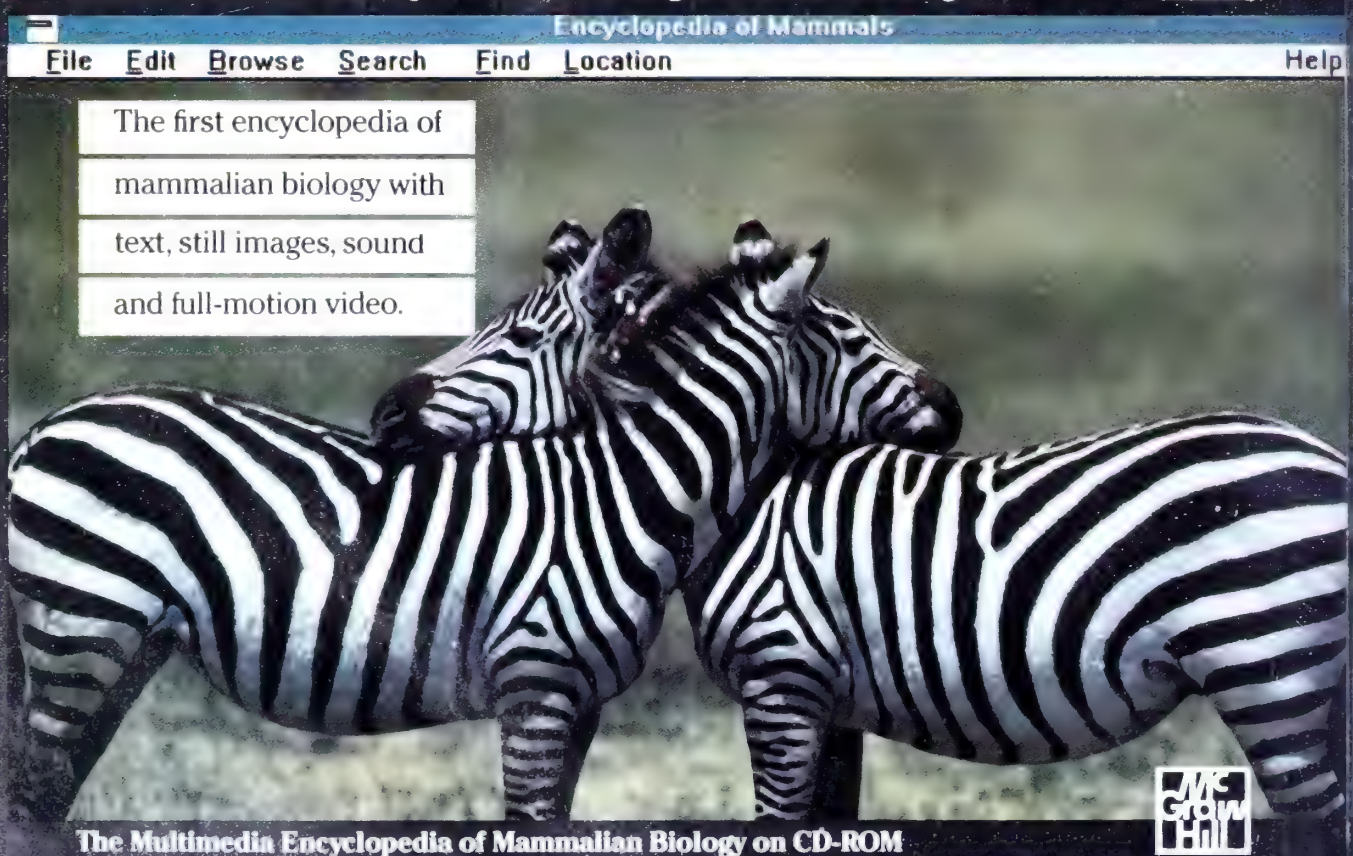

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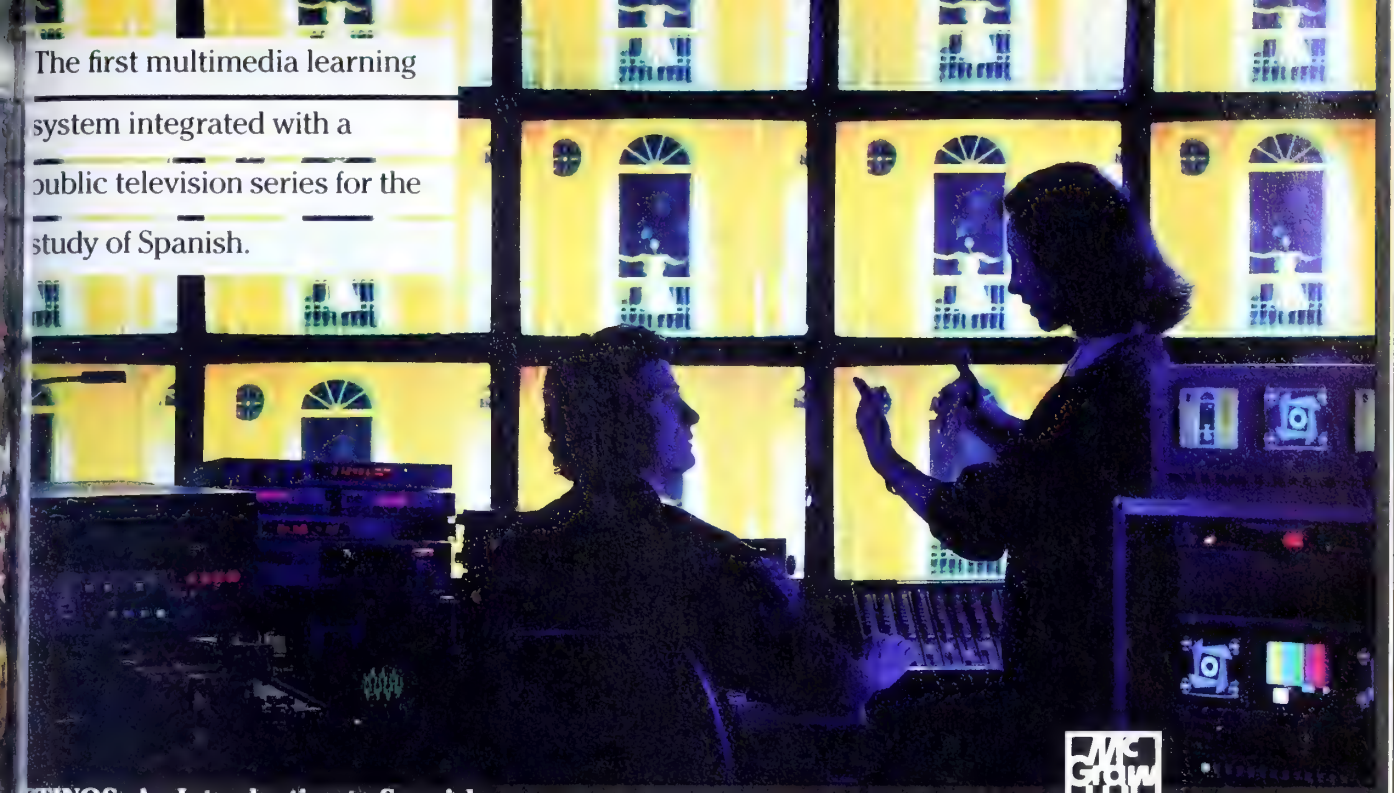

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EDITED BY AMY DUNKIN

Health

TRYING TO KNOCK THE WIND OUT OF ASTHMA

"Asthma feels like a monster is sitting on me."
—A 5-year-old child

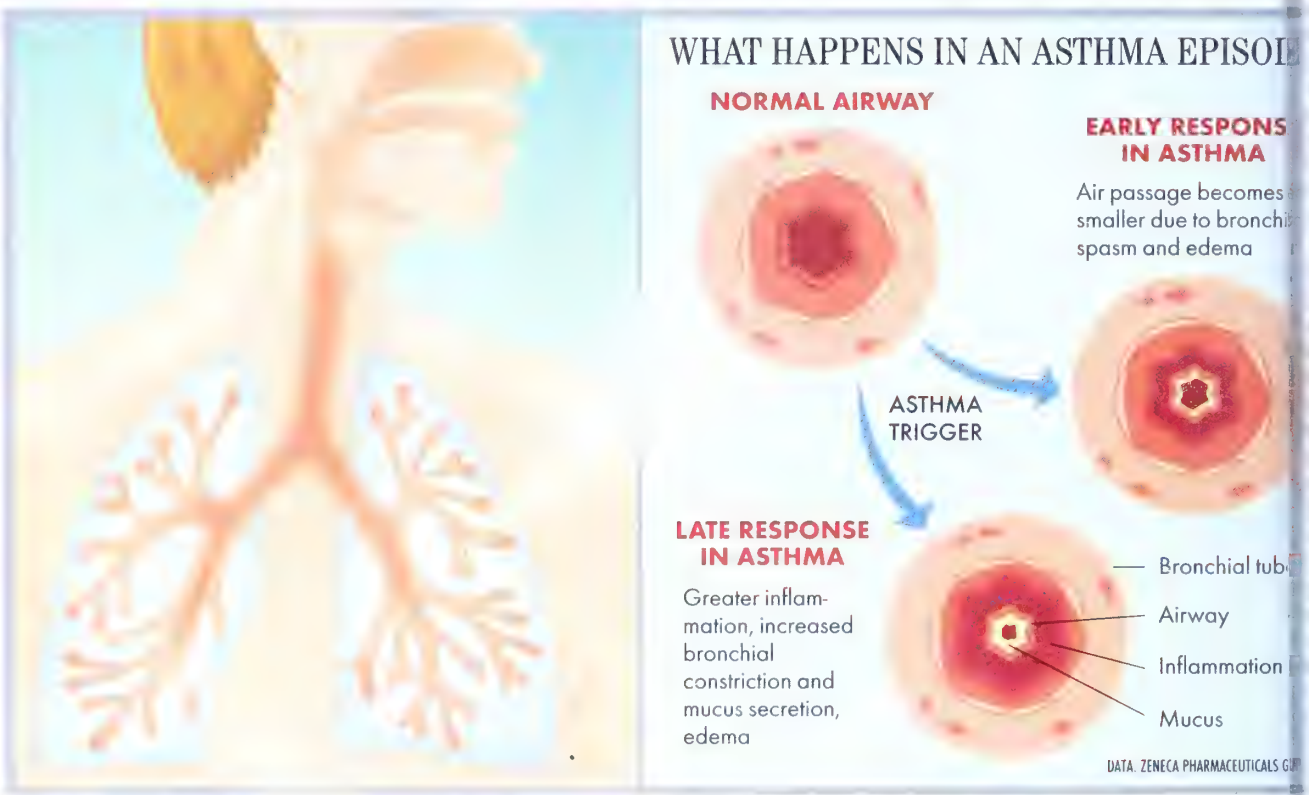
Anyone who thinks asthma is psychosomatic or mainly an excuse geeky kids use to avoid gym class need only ask a sufferer what an attack feels like. It shouldn't be hard to find a victim. Asthma is the most common chronic disease in the industrialized world, afflicting 4% to 6% of adults and 20% of children. There are 12 million asthmatics in the U. S. alone, and it costs about $6.5 billion a year to treat them.

The good news is, treatment keeps getting better. Asthma sufferers who can't get a good night's sleep can now take a long-acting inhaled bronchodilator, salmeterol, that was just approved for sale by Glaxo Pharmaceuticals under the brand name Serevent. A study published in May in the *Journal of the American Medical Assn.* found that salmeterol inhaled twice daily is more effective in preventing attacks than albuterol, a commonly used treatment that can be inhaled as much as four times a day. Plus, inhaled corticosteroids are becoming increasingly common in relieving the underlying inflammation that causes asthma attacks.

Still, the incidence, severity, and death rate from asthma have been rising steadily for a decade. According to the American Lung Assn., there was a 36% jump in the number of Americans with asthma from 1982 to 1991. Even more disturbing, the number of deaths each year has grown 66% since 1980, to well over 4,000. The rising numbers are not strictly a U. S. phenomenon: At least 14 other countries have experienced the same trends, to the mystification of the medical community.

Granted, several studies have suggested links between asthma and greater air pollution, poverty, and exposure to cigarette smoke. But even in places where the air is clean and the people not poor, such as remote Scottish islands, many are suffering more than ever. Besides, given a spectacular leap in the scientific understanding of asthm the advent of safer, mo fective drugs, virtually should die of asthma if ed properly.

"TWITCHY." And there m the heart of the proble tients aren't being t properly. That may cause they are not edu about their condition, or



rofit health association. definition of asthma nged dramatically over st decade, but special- y the change has not ckled down to all the l practitioners who the bulk of sufferers. ny years, asthma was l as a reversible ctive airway dis- and doctors fo- only on the bron- sm, or attack. But edical community considers it a c inflammatory , and specialists he inflammation airway linings auses the attack. 1991 the National tes of Health has nended a course rades asthmatics ild to severe and or anti-inflamma- rugs once the dis- oves beyond the age.

pite the changed ch to treatment, is still no cure. because research- ve yet to figure at causes asthma. isease hits people with sensitive or "twitchy" nd can occur after pro- exposure to irritants s pollution or dust, a f pneumonia, or even a cold. Asthma can also luced by exercise and ies, come on only at or get triggered for no s reason. Patients hav- attack feel as if they owning and experience ing, chest tightness, ing, and shortness of . Some sufferers are with the disease, and children find the symp- abate as they reach eens. About 25% of pa- develop it after the age Researchers are fairly that there is a genetic ment but have no idea it is.

ile scientists search for se, patients only want Virtually every sufferer ronchodilators, the most only prescribed class of in the world. These open the airway by relaxing the muscles that line the walls of the bronchial passage, making it easier for air to move through. They can come in pill, suppository, or injectable form, but the most popular by far is an inhalant, administered with the puffer most asthmatics carry around.

The most effective bronchodilators today are beta-2 agonists, sold under the names Brethaire, Maxair, Proventil, or Ventolin. They can relieve an attack in minutes by going directly to the swollen air passages. But several studies over the last few years have linked the heavy use of beta-2 agonists to increased risk of death.

TOO EFFECTIVE? Although there is some concern that the drug itself may be contributing to a worsening of the disease, many specialists believe the real problem is that the drugs are too effective. Users take a puff and relieve their symptoms, but they don't bother to get away from the cause of the attack, such as cat hair or tobacco smoke. And by opening the airways with the puffer, they are more exposed than ever to continued irritation. So the condition keeps worsening, and instead of moving to an anti-inflammatory treatment, they just take more puffs. Patients suffering fatal or near-fatal attacks have been known to take 20 puffs a day, although they would certainly balk at swallowing 20 pills. Instead, severe asthmatics should be seeking help at a hospital, where they could get oxygen and injected steroids.

People with mild asthma are fine with bronchodilators, but patients who are using them more than four times a day, or every day, are considered to have moderate asthma and should be given a regular, preventive anti-inflammatory medication. Even salmeterol, though it can prevent an attack for up to 12 hours with one puff, should be used in conjunction with an anti-inflammatory treatment, not in place of one.

This is where many doctors fail their asthma patients, say specialists. The most effective anti-inflammatories are inhaled corticosteroids, sold under the brand names Aerobid, Azmacort, Beclovent, and Vanceril. But whereas sales of bronchodilators rose some 30% from 1983 to 1990, sales of inhaled steroids increased only 3%. The reason, says Dr. Thomas Casale, director of the division of allergies and immunology at the University of Iowa Hospitals and Clinic, is a misplaced fear of steroids, which can have severe side effects when taken orally. Inhaled steroids, however, go directly to the bronchial passage and are considered extremely safe, even for children. "Both physicians and patients have concerns about safety when the word *steroid* is used," says Casale. "Old ideas change slowly, but physicians who have gone through the training process recently will be treating patients differently."

Beyond all the medications available, perhaps the most important factor in treating asthma is the patient's own behavior. Sufferers should work out a treatment plan with a specialist—and then stick with it religiously. Such a plan includes an understanding of what brings on an attack, what drugs should be taken when, and how to tell when the condition is worsening. For that reason, a $25 handheld device known as a peak-flow meter can be as crucial as any medication. Patients should check their breathing regularly with the meter, keep a record of the readings, and notify their doctor if their lung power deteriorates. With careful monitoring, asthma sufferers can go a long way toward getting that monster off their chest. *Catherine Arnst*

ASTHMA TREATMENT GUIDELINES: WHAT TO TAKE WHEN

All patients should have a written asthma management plan, a peak-flow meter to monitor breathing, awareness of early warning signals of an attack, knowledge of how and when to increase medications, and a plan to remove as many allergic factors as possible from the home.

MILD ASTHMA Inhaled bronchodilators, such as theophylline or beta–2 agonists, are taken to relieve symptoms or before exercise. If used daily, or more than four times in one day, additional therapy may be needed.

MODERATE ASTHMA Anti-inflammatory medications, such as inhaled corticosteroids or inhaled cromolyn sodium, are taken daily to avoid symptoms. Oral corticosteroids are used on a short-term basis to treat serious attacks. Bronchodilators relieve symptoms, and, if necessary, a long-acting oral beta–2 agonist can prevent attacks during the night.

SEVERE ASTHMA If problems cannot be controlled with maximum doses of inhaled anti-inflammatory or bronchodilator medications, an oral corticosteroid may be required under the direction of an asthma specialist. Condition may also require supplemental oxygen, intensified treatment, and hospitalization.

DATA: AMERICAN LUNG ASSN

RESOURCES ON ASTHMA

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- **NATIONAL JEWISH CENTER OF IMMUNOLOGY & RESPIRATORY MEDICINE** 800 222-LUNG

DATA: BUSINESS WEEK

Smart Money

BROKERS SURE WON'T PLUG THESE DRIPs

Low costs and hassle-free service have made no-load mutual funds an investor favorite. Now along comes an idea only a broker could hate: no-load stocks.

For years, individuals have saved on broker commissions by buying stocks directly from public companies through dividend reinvestment plans (DRIPs). But in most of the nation's 900 DRIPs, only those who already own stock are eligible to participate. The exceptions—some 50 companies ranging from Atlantic Energy to U S West—have moved to open enrollment, allowing the public to make initial investments without paying a broker.

That change is the biggest of many afoot as DRIPs borrow popular features from no-load funds. Exxon's program, for instance, not only allows investors to buy their first shares at no fee but also lets them pick up additional shares through automatic bank-account withdrawals. Several plans, including Mobil's, offer dividend reinvestment for individual retirement accounts. And some, such as U S West, are allowing participants to invest weekly or monthly, rather than on the quarterly schedule once standard for DRIPs. At least half of all DRIPs will offer open-enrollment and other expanded services within five years, predicts Michael Foley, vice-president of First Chicago Trust, which handles the paperwork for 13 million shareholder DRIP accounts.

BIT BY BIT. That's not to say the plans are for everyone. Timing of trades is still a weakness: DRIP investors can't move fast enough to take advantage of day-to-day swings in stock prices. Some plans, particularly those operated by utilities such as Duke Power, are open only to customers or residents of service areas. And some are caving in to Wall Street's penchant for adding fees to cover administration; U S West charges $1 to reinvest dividends. Even the new push into open enrollment may eventually come at a cost, such as a charge of $15 or so to start a new account.

On the plus side, DRIPs allow long-term investors to accumulate large stakes while plowing in a little at a time. By committing a fixed amount regularly, participants benefit from dollar-cost averaging. That results in a lower average purchase price, since the fixed investment buys more stock when the price is low and less when it's high.

As companies make it easier to get started in DRIPs, observers predict a surge in interest. "Investors will go crazy for them," says Charles Carlson, editor of *DRIP Investor* ($59 a year; 219 931-6480) and author of *Buying Stocks Without A Broker* ($16.95; McGraw-Hill). Their brokers may go even crazier. *Greg Burns*

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DATA DOW THEORY FORECASTS INC *6/6/94

A NEW SHOW BOAT: BROADWAY-BOUND

Theater

GIVE MY REGARDS TO —TORONTO

A highlight of the June 12 Tony Awards ceremony will be a live performance of *Ol' Man River*, the classic from the musical *Show Boat*. Inclusion of the song reflects the belief that a new version of *Show Boat* will be a hot ticket on Broadway. But the Tony production will actually be staged 500 miles to the north—in Toronto, where *Show Boat* is playing with most of the stars who will open it at New York's Gershwin Theater on Oct. 2.

Show Boat is one reason increasing numbers of U. S. residents are traveling to Toronto for theater. The city offers more Broadway-style musicals than any other in North America after New York. And thanks to the weak Canadian dollar, now worth about 72 U. S. cents, it has become more affordable.

Theater lovers can choose from four musicals: *Phantom of the Opera*, *Crazy for You*, *Miss Saigon*, and *Show Boat*. Prices are New York scale: Orchestra seats cost about $65 on a Friday [illegible] urday night, [illegible] a midweek m[illegible] of *Crazy for* Y[illegible] instance. But [illegible] get your [illegible] through one [illegible] Remarkable S[illegible] Value Pa[illegible] (RSVPs) availab[illegible] Oct. 31 fro[illegible] Metro Toront[illegible] vention & V[illegible] Assn. (800 36[illegible] you can cut th[illegible] cost of your st[illegible]

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TOP SQUADS. In addit[illegible] the big-name shows, T[illegible] offers dozens of other [illegible] such as *The Mousetra[illegible]* *Forever Plaid*. The city [illegible] than two hours from tw[illegible] repertory theaters in O[illegible] The Stratford Festiva[illegible] 567-1600), known fo[illegible] Shakespearean produc[illegible] and the Shaw Festiva[illegible] 267-4759), specializing in[illegible] by George Bernard Sha[illegible]

You might also plan [illegible] around upcoming s[illegible] events. From June 24 th[illegible] July 3, the du Maurie[illegible] Festival will bring mor[illegible] 1,000 musicians to town. [illegible] Aug. 4 to 14, you can ca[illegible] top squads at the 1994 [illegible] Basketball Championship[illegible] from Sept. 17 to Dec. [illegible] ronto will welcome the I[illegible] Foundation's collectio[illegible] French Impressionist an[illegible] Impressionist painting[illegible] tour. The show is expec[illegible] be a sellout, as it was in [illegible] and Paris. But some hot[illegible] cluding the Four Season[illegible] offering packages with e[illegible] tickets. *Bill Sy[illegible]*

Software

ON THE ROAD AGAIN—WITH A DIGITAL MAP

ou're on vacation and you're lost. You must have missed a turn, now you're driving in a y part of an unfamiliar . Instead of panicking, ind your way by consult- map on the screen of a p resting next to you on eat. A small icon on the traces the route of the s it moves.

ie next phase in compu- ed mapping software is t to arrive. Portable PC rs who insert a credit- size device from Rockwell national or Trimble Navi- n will be able to receive ing information from the al Positioning System, a ellation of satellites orbit- he planet. By coupling the e with the latest version oad Scholar Software's Streets For Windows, you urn the computer into an hicle navigation system lets you follow your ac- movement on the map.

ie military and boaters long relied on global posi- ng technology. But until ntly, the receivers have too costly for most con- rs. Together, City Streets the add-on card will run t $499. And soon, Auto- will unveil Automap ets for $50 on two CD- , with detailed maps that work with receivers from et Communications. The s will come with down- maps of New York, Chi- , and other cities, plus an- r area of your choice. itional maps cost $30. lem is, not many people laptops with CD-ROMs.

CODE AID. While digital s and affordable global po- ning technology offer gee- capabilities, the programs have more down-to-earth . City Streets and Taxi, News Electronic Data, print out the local streets need to follow from your hotel to a business meeting. Automap Road Atlas is a long-distance planner that can help you concoct a cross-country vacation route. They also have advantages over paper maps. By typing in the name of a town, the result will be highlighted; no need to strain your eyes searching through the D3 or E4 sections as you try to unfold the darn thing.

The high-tech maps can provide multiple levels of scale. DeLorme Mapping's Street Atlas USA CD-ROM lets you zoom in and out of 13 levels of magnitude, from 500 miles down to street-level detail. You can also punch in a zip code; the program identified 36778 as Snow Hill, Ala. By clicking on a "locate" button, you could call up a map of the area. DeLorme claims the CD-ROM includes every U. S. street. City Streets comes with one city of your choice, plus demo maps of San Francisco, Manhattan, and Washington.

Some programs also provide data not included in the maps you might get at a gas station. Taxi includes the Zagat restaurant and hotel guides for New York, Chicago, Los Angeles, and elsewhere. The software will search for a restaurant by cuisine, price, or decor.

LABORIOUS. Many programs let you annotate maps to mark where customers, suppliers, or family members live. Automap Pro, the upscale sibling to the company's $80 Road Atlas route planner, is geared for travel managers. Like the cheaper version, it includes maps that cover more than 410,000 miles of highways and state and county roads. But Automap Pro lets managers overlay their own databases. For instance, a customer service representative might display coordinates for all stores in a region. The rep can click on each point to bring up the name, address, phone number, and even a picture of the outlet. Sales types who need to make multiple stops can consult the program to plan an itinerary. Users can specify an arrival or departure time for a city, or indicate when they plan to stay overnight.

All the map programs put to a quick test by BUSINESS WEEK seemed to provide accurate directions. But there were some limitations. Turnpike road warriors found Automap's preferred route from New York to Washington unusually complicated and not the most direct. And mapping out Big Apple directions with Adept's Street Wizard proved needlessly laborious; too many mouse clicks were required to concoct a simple route. It just goes to show you that while computerized maps can be helpful, it also pays to consult someone who already knows the way. *Edward Baig*

MAPPING OUT TRAVEL SOFTWARE

AUTOMAP PRO $399 AUTOMAP	Lets you plan cross-country routes and create geographic databases
CITY STREETS FOR WINDOWS $100 ROAD SCHOLAR SOFTWARE	Can track your movement with Global Positioning System add-on
STREET ATLAS USA $169 DELORME MAPPING	Company claims CD-ROM includes every street in the country
STREET WIZARD $99 ADEPT COMPUTER SOLUTIONS	Comes with map of one county; additional counties cost $50
TAXI $70 NEWS ELECTRONIC DATA	Combines city maps with the Zagat restaurant and hotel surveys

DATA: BUSINESS WEEK

Worth Noting

NNUITY TIP. Annuities is- before Oct. 21, 1979 have ecial tax status you give you swap your old annuity for a new one, the IRS ruled recently. If you die before the old annuity starts paying out, your heirs will not owe income tax on the increased value. But for contracts issued after the 1979 date, the accumulation amount, over and above the premiums paid, is taxable as ordinary income.

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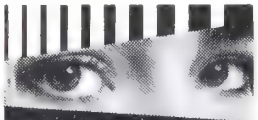

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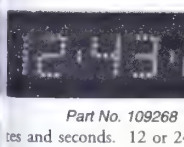

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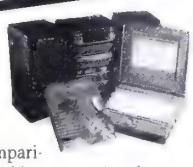

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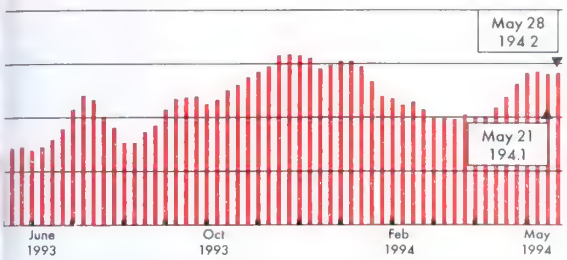
usiness Week Index

DUCTION

from last week: 0.1%
from last year: 3.7%

1967=100 (four-week moving average)

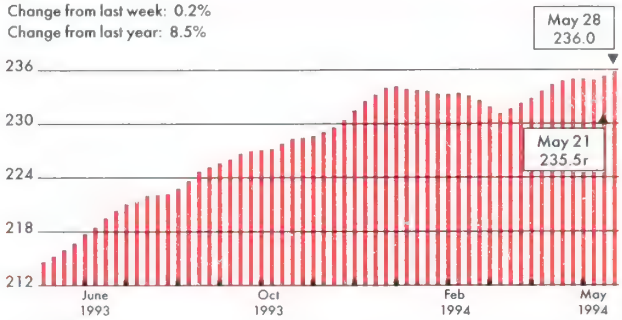


roduction index was virtually unchanged in the week ended May 28. ally adjusted output of steel, trucks, electric power, coal, and lumber and rail- traffic all increased. Auto production was down, and crude-oil refining, paper, perboard output levels were unchanged. Before calculation of the four-week average, the index rose to 195, from 193.6. The index rose to 194.2 for re month of May, from April's 191.6 reading.

BW production index copyright 1994 by McGraw-Hill Inc

LEADING

Change from last week: 0.2%
Change from last year: 8.5%



The leading index increased slightly during the week ended May 28. Higher stock prices and faster growth rates in materials prices and M2 barely offset the drag indicated from higher bond yields and slower growth in real estate loans. Data on business failures were unavailable. Before calculation of the four-week moving average, the index was virtually unchanged at 236.3. For the month of May, the index increased to 236, from 235.1 in April.

Leading index copyright 1994 by Center for International Business Cycle Research

DUCTION INDICATORS

	Latest week	Week ago	% Change year ago
5/4) thous. of net tons	1,838	1,973#	−1.7
(6/4) units	120,805	135,127r#	9.5
(6/4) units	104,099	114,093r#	22.2
C POWER (6/4) millions of kilowatt-hours	57,304	56,752#	6.9
OIL REFINING (6/4) thous. of bbl./day	14,209	14,144#	1.8
5/28) thous. of net tons	19,957#	19,798	6.3
OARD (5/28) thous. of tons	879.8#	869.2r	5.8
(5/28) thous. of tons	825.0#	811.0r	4.6
R (5/28) millions of ft.	484.7#	484.8	4.7
EIGHT (5/28) billions of ton-miles	22.9#	22.6	5.0

s: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, n Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association can Railroads

EIGN EXCHANGE

	Latest week	Week ago	Year ago
SE YEN (6/8)	104	105	106
N MARK (6/8)	1.67	1.64	1.63
POUND (6/8)	1.51	1.51	1.53
FRANC (6/8)	5.69	5.61	5.47
IAN DOLLAR (6/8)	1.37	1.38	1.28
FRANC (6/8)	1.41	1.39	1.46
AN PESO (6/8)[3]	3.351	3.323	3.126

s: Major New York banks. Currencies expressed in units per U.S. dollar, except for British xpressed in dollars

CES

	Latest week	Week ago	% Change year ago
(6/8) $/troy oz.	381.450	386.300	2.7
SCRAP (6/7) #1 heavy, $/ton	111.50	122.50	0.0
TUFFS (6/6) index, 1967=100	214.1	217.9	5.8
R (6/4) ¢/lb.	106.4	108.4	21.0
NUM (6/4) ¢/lb.	64.0	64.5	22.4
(6/4) #2 hard, $/bu.	3.62	3.59	9.0
N (6/4) strict low middling 1-1/16 in., ¢/lb.	79.54	80.60	41.7

s: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (6/3) S&P 500	457.98	455.80	1.5
CORPORATE BOND YIELD, Aaa (6/3)	7.96%	7.98%	7.9
INDUSTRIAL MATERIALS PRICES (6/3)	101.3	101.5	6.1
BUSINESS FAILURES (5/27)	NA	NA	NA
REAL ESTATE LOANS (5/25) billions	$423.5	$423.9r	3.9
MONEY SUPPLY, M2 (5/23) billions	$3,560.7	$3,556.2r	2.6
INITIAL CLAIMS, UNEMPLOYMENT (5/21) thous.	366	367	8.0

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
BUSINESS WEEK PRODUCTION INDEX (May)	194.2	191.6r	3.7
BUSINESS WEEK LEADING INDEX (May)	236.0	235.1r	8.4
EMPLOYMENT, CIVILIAN (May) millions	122.9	122.3	2.4
UNEMPLOYMENT RATE, CIVILIAN (May)	6.0%	6.4%	−20.0

Sources: BW, CIBCR, BLS

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (5/23)	$1,144.3	$1,143.6r	7.4
BANKS' BUSINESS LOANS (5/25)	291.9	292.0	4.9
FREE RESERVES (5/25)	647r	655r	−41.0
NONFINANCIAL COMMERCIAL PAPER (5/25)	154.1	154.8	−3.0

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (6/7)	4.03%	4.60%	2.96%
PRIME (6/8)	7.25	7.25	6.00
COMMERCIAL PAPER 3-MONTH (6/7)	4.53	4.60	3.26
CERTIFICATES OF DEPOSIT 3-MONTH (6/8)	4.43	4.51	3.25
EURODOLLAR 3-MONTH (6/3)	4.50	4.49	3.21

Sources: Federal Reserve, First Boston

data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment. stern Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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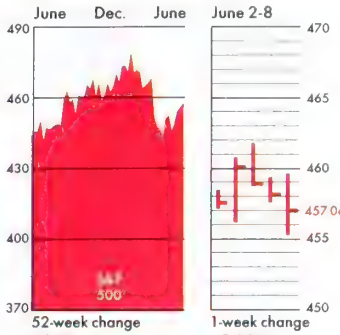
vestment Figures of the Week

ITARY

-income investors finally accept the idea that the s slowing, bond prices and interest rates But that didn't impress sstors. U. S. stocks drift- n quiet trading. The big s overseas. Tokyo stocks to rally, making another or the year. British equi- d 3.6% for the week, nch market, 3.4%. The iss, and Dutch stock gged gains in excess of l.

STOCKS



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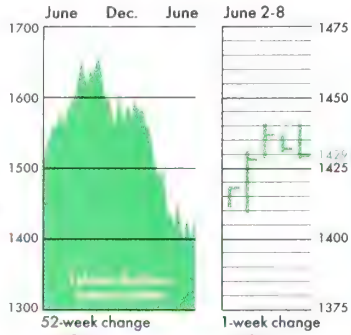

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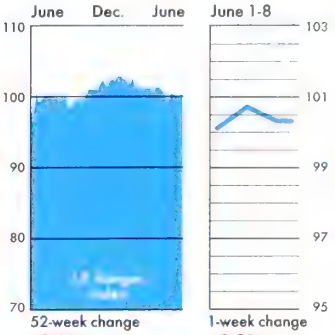


KET ANALYSIS

CKS	Latest	% change Week	52-week
:S INDUSTRIALS	3749.5	−0.3	6.8
OMPANIES (S&P MidCap Index)	171.0	−0.4	4.7
MPANIES (Russell 2000)	249.9	−0.1	8.8
ANIES (Russell 3000)	263.4	−0.1	3.4

I STOCKS	Latest	% change (local currency) Week	52-week
FINANCIAL TIMES 100)	3038.2	3.6	6.0
KKEI INDEX)	21,262.0	1.0	3.3
(TSE COMPOSITE)	4201.3	−2.1	8.8

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.21%	4.25%	3.17%
30-YEAR TREASURY BOND YIELD	7.28%	7.38%	6.88%
S&P 500 DIVIDEND YIELD	2.77%	2.80%	2.81%
S&P 500 PRICE/EARNINGS RATIO	20.1	20.2	22.5

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 200-day moving average	462.0	461.9	Negative
Stocks above 200-day moving average	37.0%	35.0%r	Positive
Speculative sentiment: Put/call ratio	0.47	0.40	Positive
Insider sentiment: Vickers sell/buy ratio	0.99	1.11	Positive

STRY GROUPS

BLOOMBERG FINANCIAL MARKETS

NTH LEADERS	% change 1-month	12-month	Strongest stock in group	% change 1-month	12-month	Price
S AND LOANS	10.9	8.1	GREAT WESTERN FINANCIAL	20.3	15.6	18 1/2
IAL LOANS	9.3	4.5	HOUSEHOLD INTERNATIONAL	17.0	2.2	35 1/4
INE INSURERS	9.3	10.0	CIGNA	18.3	22.1	72 5/8
TER SOFTWARE	9.0	21.7	COMPUTER ASSOCIATES INTL.	26.9	47.5	40 3/4
CENTER BANKS	9.0	26.8	CHASE MANHATTAN	15.6	30.5	39

NTH LAGGARDS	% change 1-month	12-month	Weakest stock in group	% change 1-month	12-month	Price
JNICATIONS EQUIPMENT	−12.6	−14.9	DSC COMMUNICATIONS	−36.3	−12.0	19 5/16
LTY APPAREL RETAILERS	−9.2	−14.3	GAP	−15.2	17.4	39 5/8
PLORATION AND PRODUCTION	−5.6	−26.4	MAXUS ENERGY	−8.9	−54.4	4 1/2
MENT STORES	−5.3	2.9	MERCANTILE STORES	−9.4	0.8	33 3/4
OBILES	−5.1	8.2	GENERAL MOTORS	−8.0	21.4	50 3/8

UAL FUNDS

MORNINGSTAR INC.

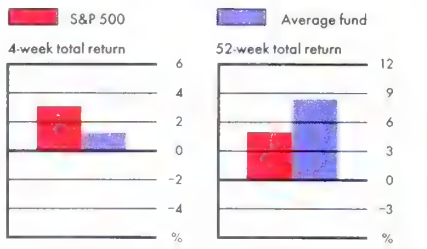
total return	%
ASTER EMERGING AMERICAS	12.9
Y LATIN AMERICA	12.8
L LYNCH LATIN AMERICA A	11.7

otal return	%
ER LATIN AMERICA	53.0
D EMERGING MARKETS INSTL.	51.5
LYNCH LATIN AMERICA A	49.0

LAGGARDS

Four-week total return	%
WRIGHT EQUIFUND ITALIAN NATL. FID. EQTY.	−12.4
FIDELITY SELECT SOFTWARE & COMPUTER	−8.8
KEYSTONE AMERICA HARTWELL EMERG. GR.C	−6.3

52-week total return	%
MONITREND GOLD	−35.5
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−23.8
PILGRIM CORPORATE UTILITIES	−21.7



TIVE PORTFOLIOS

DRI/McGRAW-HILL

nounts
t the present
$10,000
one year ago
ortfolio

ges indicate
otal returns

Foreign stocks	U.S. stocks	Gold	Treasury bonds	Money market fund
$12,423	$10,591	$10,244	$10,244	$10,202
−0.65%	+0.37%	−1.83%	+2.20%	+0.04%

this page are as of market close Wednesday, June 8, 1994, unless otherwise indicated. ups include S&P 500 companies only; performance and share prices are as of market close

June 7. Mutual fund returns are as of June 3. Relative portfolios are valued as of June 7. A more detailed explanation of this page is available on request. r = revised

THE TRAGEDY OF THE CLINTON PRESIDENCY

A pall is descending upon the Clinton Presidency. After 1½ years in office, the disparity between the ideal and the real, the promise and the product, has grown to tragic proportions.

Rarely have the personal character flaws of a President so eviscerated the policy priorities of his own Presidency. The tragedy of Bill Clinton lies not in the difficulty of overcoming opposition to his audacious domestic agenda but in his self-destructive inability to focus and discipline himself and his Administration (page 34).

A White House that is run as a frat house does not get things done. A President who is his own Chief of Staff chokes on the details. A policy team split into politicos and professionals flip-flops on issues. And a man who talks about his underwear on TV does not inspire respect or loyalty abroad.

The result, especially on the international stage, is the image of a President reduced to a comic figure—indecisive, disorganized, and given to trying on strategies only to discard them at the briefest criticism. It is ad hoc government, where no single principle appears important enough to fight to the death for. If the projection of power is key to any President's authority, then this Presidency is increasingly impotent. It folds at the slightest opposition, whether the issue is personnel appointments, domestic programs, or foreign affairs. Even tiny Singapore feels it can mock the President of the United States by refusing his personal request not to cane an American teenager.

Clinton's proclivities toward vacillation have progressed to the point where he draws public criticism for issues a his making and for which his predecessors received p probrium. North Korea started developing its nuclear we a decade ago, and four countries—India, Pakistan, Israe South Africa—"went nuclear" during the 1980s. Neither G Bush nor Ronald Reagan received any blame for nuclea liferation. Bosnia and Haiti are problems that previous idents couldn't solve, either.

Yet Clinton is reaping the whirlwind for his "procra tion" on these issues while he receives little credit for he has accomplished—reducing the budget deficit, pron NAFTA and GATT, and encouraging reforms of health ca welfare.

Bill Clinton promised to tackle the hard issues, but h fumbled in the execution. The President is running Presidency. But that could change—if the White H gets its house in order. A tough Chief of Staff, orga lines of authority, more focus on critical issues, and less ter would end the appalling mess that passes for a ministration.

On foreign policy, the President desperately needs a er, more seasoned team. The country must have a Secr of State who commands respect in Europe and Asia, son who can begin the serious process of coming up w fresh, post-cold-war foreign policy for America.

Bill Clinton believes in personal redemption. Only h redeem his own Presidency. He owes it to himself—an nation—to try.

THE REAL IMMIGRATION PROBLEM

Demonizing immigrants is quite the fashion among politicians these days. Last year, the "trouble" with immigrants was that they just weren't learning English fast enough. Now, it is said, they've become welfare deadbeats, costing taxpayers billions.

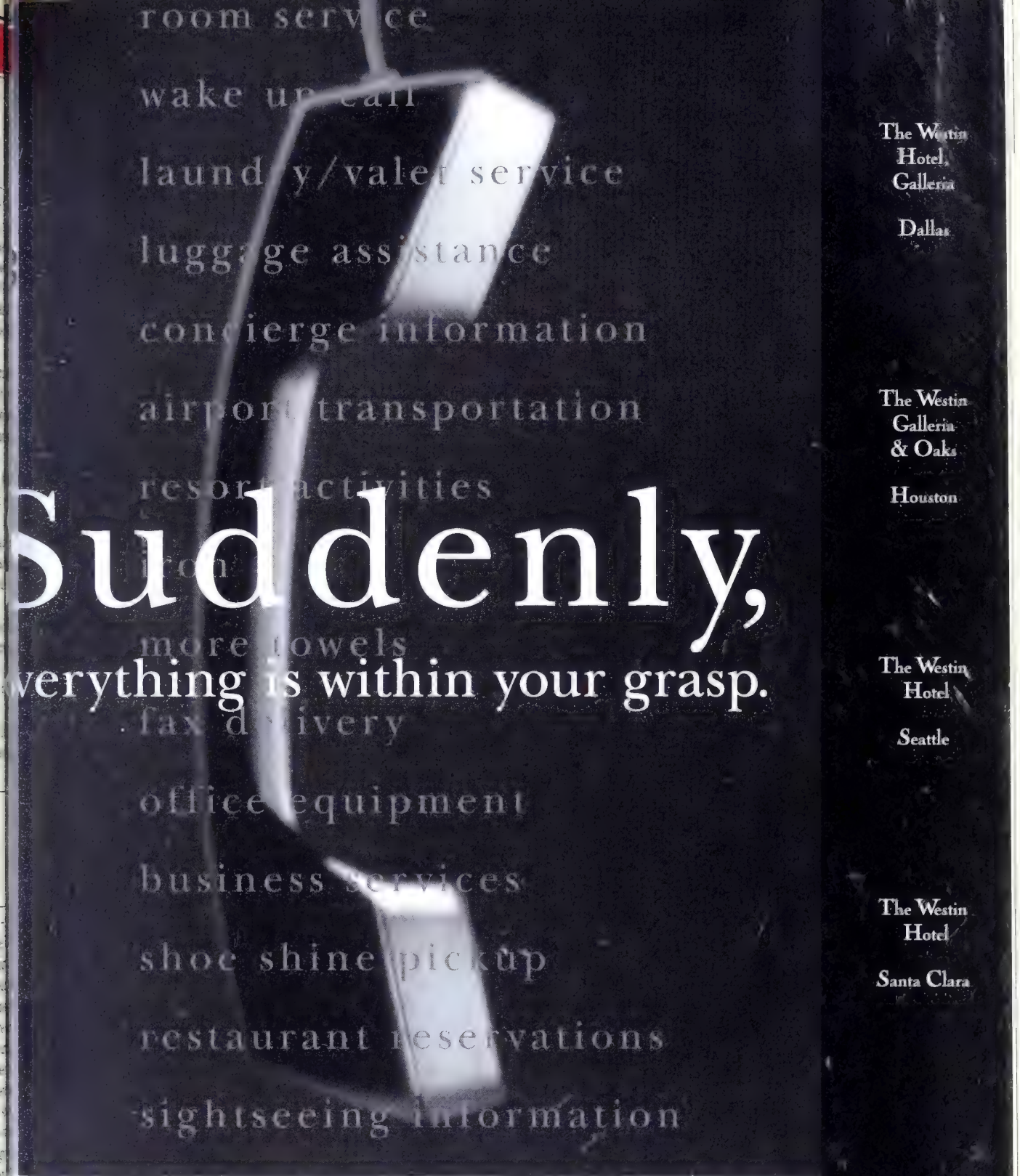
The truth is, the 700,000 to 800,000 legal immigrants who are admitted through the regular immigration system every year rarely go on welfare. They tend to be more educated than native-born Americans and pay more in taxes than they receive in public benefits. On the whole, U. S. immigration policy works well, and the nation should be proud of living up to its heritage.

But there is a problem that stems from two groups—political refugees and illegals. It is the 120,000 political refugees fleeing communism or dictatorship every year, and, to a lesser extent, the 200,000 or so illegal immigrants, mostly from Latin America, who are a drain on the public purse.

Political refugees have a striking welfare rate. In particular, some 49% of Cambodian, 46% of Laotian, 25.8% of Vietnamese, and 16.3% of immigrants from the former Soviet Union were on welfare in 1990. Not only do refugees have a higher rate of welfare use, they get more welfare benefits— than twice what native-born Americans receive (page

Any immigration reform must focus on those immig who are on welfare. Clearly, the solution to the illeg migration problem is more effective federal enforceme the law. The solution to the refugee problem is more plex. Government efforts to aid refugees have encou many of them to become mendicants. Bringing refugee fare payments in line with standard benefits would en age refugees to take jobs in the private sector while s the U. S. several billion dollars a year. A second step w be to focus special educational programs on refugee gr Refugees tend to be much less educated than other leg migrants or native-born Americans.

The issue of whom to let into a land of immigrants is fr with great emotion. The U. S. has an obligation to help t such as the Hmong of Laos, who were allies in its fo wars. But even America cannot take in all of the world litical casualties. It already accepts more immigrants th other nations of the world combined. The stirrings of the must be tempered with the practicalities of assimilatio



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WESTIN
HOTELS & RESORTS

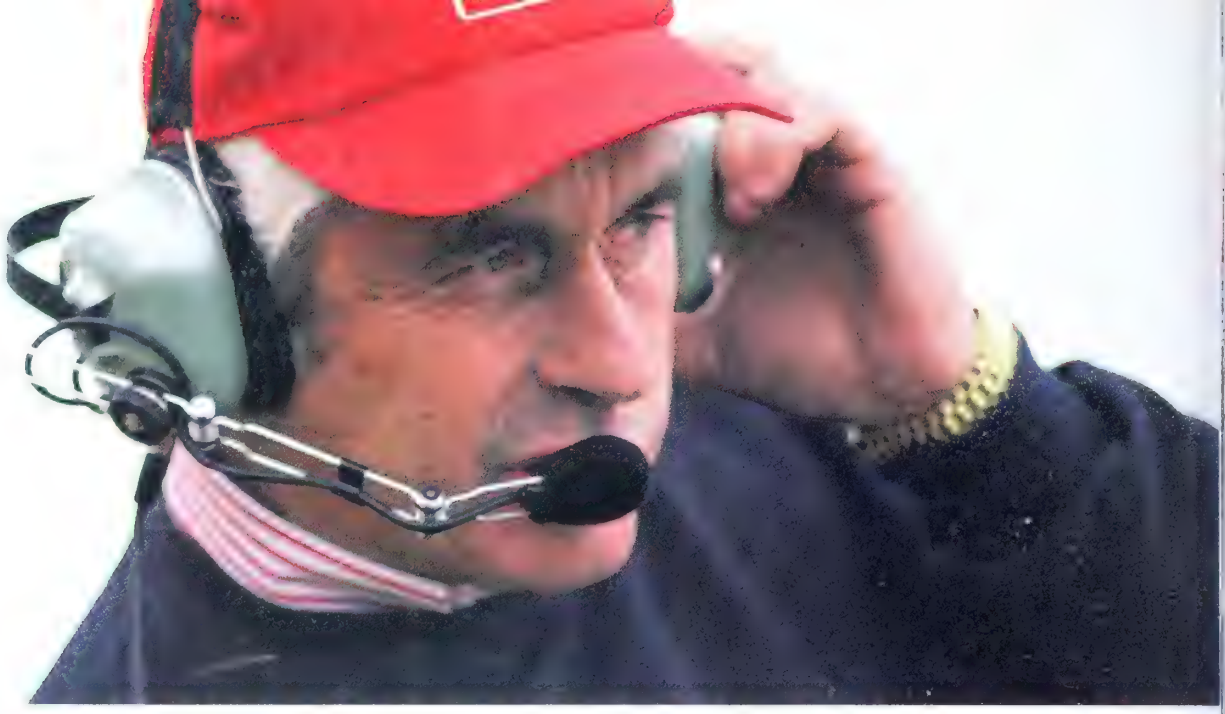
"When I hear peop
cars, they're talki

Chuck Camilleri worked on the production line at General Motors' Livonia Engine
even before there was a production line. Chuck and about eighty other workers sat
with machine tool suppliers and engineers to plan it from the ground up. It wasn't
Sometimes it was a real battle. But the more people got involved, the more they

talking about our
about me, too."

General Motors

says, "Everyone's attitude was let's do top quality work and let's do it right."
ıe Livonia Engine Plant turned out to be a model of safety, efficiency and quality.
ıll that work, Chuck can be sensitive about the reputation of the cars he helps build.
ly natural. He puts a bit of himself into every one of them.



"One thing you learn in racing is that they don't wait for you." *Roger Penske*

Congratulations again, Roger!

When he was 14 years old, Roger Penske's father took him to see his first Indianapolis 500. He hasn't missed one since. "The crowd, the excitement—it just got to me," he recalls. "That's when I said to myself, 'Someday I'm going to compete here.'"

Eighteen years later he made it to Indy as the leader of Team Penske—"a group of drivers, engineers, and mechanics who were as committed to the challenge of racing as I was." To date, Team Penske has won ~~nine~~ ten! Indy 500 victories, making it the most successful team ever.

In addition to managing his racing team, Penske runs an international multibillion-dollar automotive business. Whatever his endeavor, he uses the same management techniques. "I try to teach my people that it's up to them to innovate, to make things happen. You can't just sit around and wait."

In his work, Roger Penske combines a strong focus on results with attention to detail. "The thing I like about Rolex," he explains, "is that they don't compromise either. If you're going to do something, you might as well be the best at it. That's why I've worn a Rolex for over two decades."

ROLEX

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D ANNUAL SCOREBOARD SCAMS INFO-HIGHWAY ROBBERY MERCK CAN IT REGA ITS MAGIC?

IESS WEEK
June 27

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BusinessWeek

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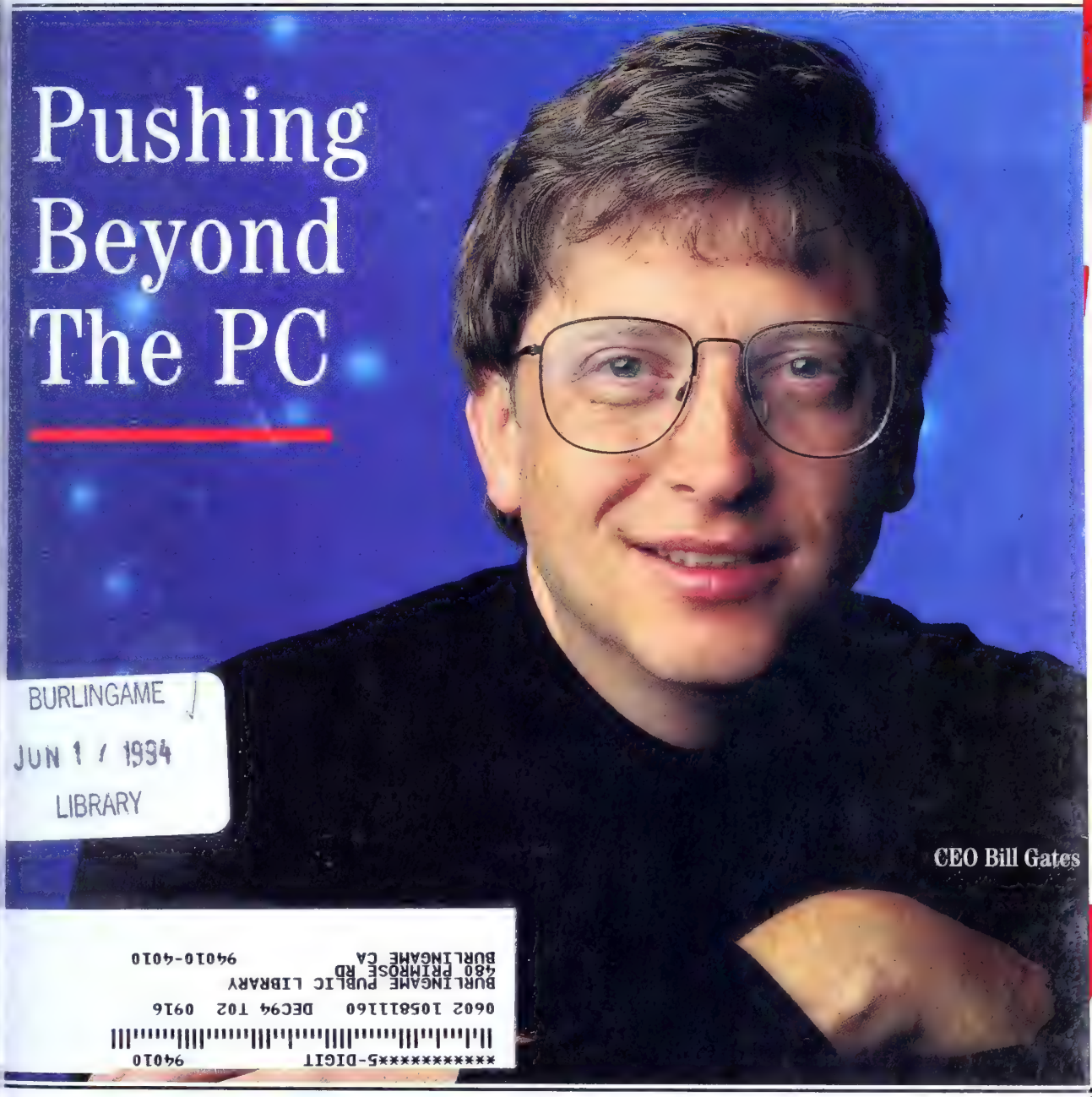
MICROSOFT

Pushing Beyond The PC



CEO Bill Gates

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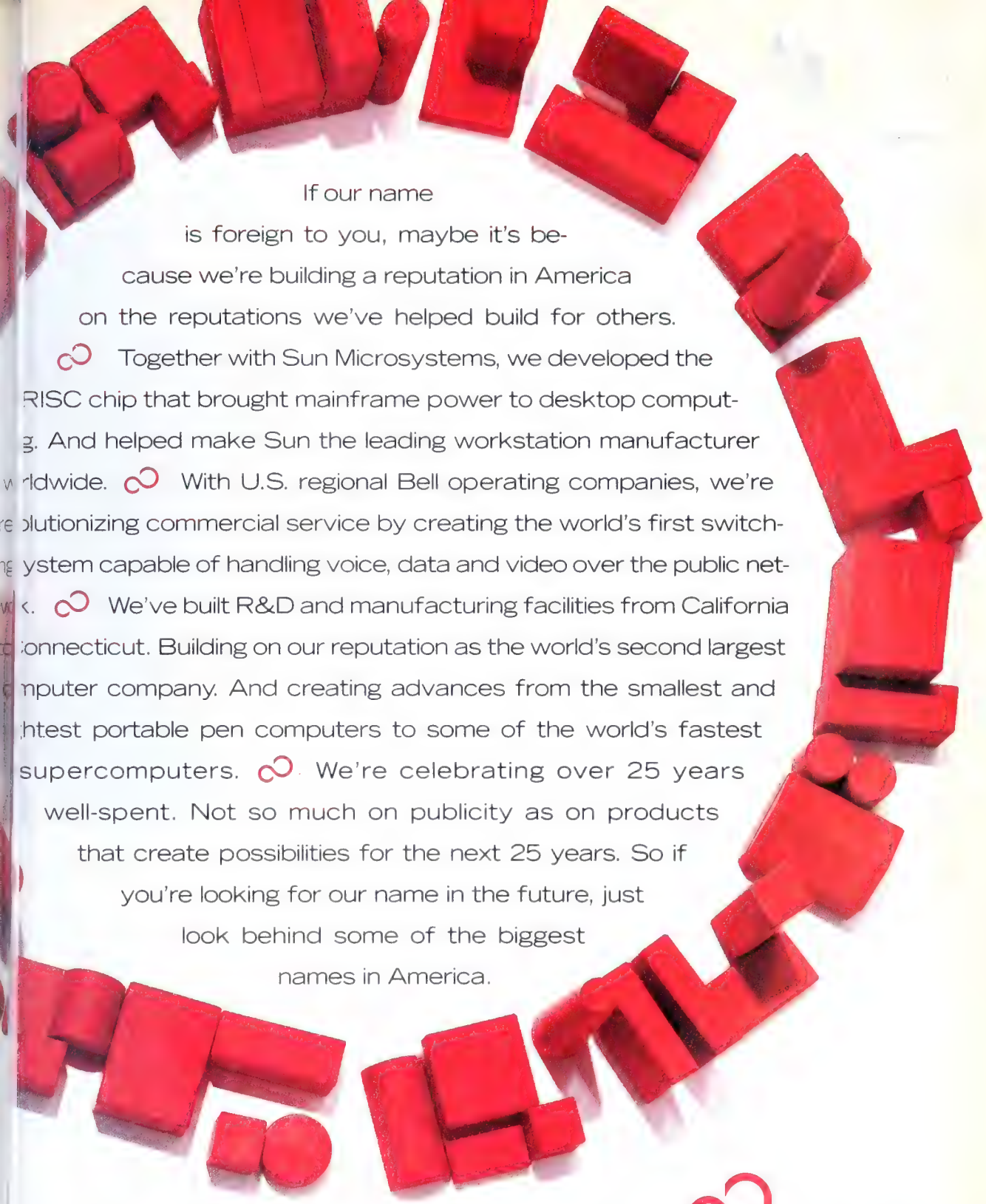

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on the reputations we've helped build for others.

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rldwide. With U.S. regional Bell operating companies, we're
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ystem capable of handling voice, data and video over the public net-
k. We've built R&D and manufacturing facilities from California
onnecticut. Building on our reputation as the world's second largest
mputer company. And creating advances from the smallest and
htest portable pen computers to some of the world's fastest
supercomputers. We're celebrating over 25 years
well-spent. Not so much on publicity as on products
that create possibilities for the next 25 years. So if
you're looking for our name in the future, just
look behind some of the biggest
names in America.

FUJITSU

COMPUTERS, COMMUNICATIONS, MICROELECTRONICS

BusinessWeek
NUMBER 3378
JUNE 27, 1

CAN YOU SAY "EDUTAINMENT"? PATRICIA STONESIFER OVERSEES MICROSOFT'S FAST-GROWING CONSUMER SOFTWARE DIVISION

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Up Front

EDITED BY LARRY LIGHT AND JULIE TILSNER

TALK SHOW

At the rate we are going... within 10 years, more than half our children will be born in homes where there has never been a marriage.

–President Bill Clinton, in his welfare reform speech, June 14

TAXES AT WORK

NO TIME FOR BASE CLOSINGS

Would President Clinton play politics with the bipartisan commission created to shut down surplus military facilities? Nooo, that would be wrong, demur the Clintonites. But don't expect next year's round of base closings to be on the same massive scale as previous rounds, since widespread closings would wound 1996 Democratic election chances. Word at the White House is that future closings likely will be spread over several years, minimizing the pain.

REALPOLITIKING: *Clinton at a California base*

Bill Clinton is exquisitely aware of the economic—and political—impact of base closings. When Clinton barnstormed California in late May, he heard pleas at every stop for easing the sting of defense cuts. At Sacramento's McClellan Air Force Base, a giant logistics center expected to be axed, protesters waved signs that read "Save McClellan."

The Pentagon recommends which bases to close, the special commission chooses the actual list, and the President must accept or reject it all. In the three rounds thus far under this system—in 1988, 1991, and 1993—103 facilities have been zapped.

While Defense Secretary William Perry still plans to go ahead with the 1995 round, don't look for a big impact in vote-rich California. "This will be strictly a Pentagon decision," says a White House pol, struggling to keep a straight face. "But you could certainly make a case that given the pain California has suffered, more cuts now are unwise."

Amy Borrus and Lee Walczak

CYBERMANIA

SO YOU WANNA BE A TELECOM STAR

First was SimCity, PC game software from Maxis that lets you design and run your own simulated city—offices, traffic, and all. Later, Maxis produced SimAnt (an ant colony) and SimHealth (your own national health program).

Now, phone-company execs can use similar techniques to plan for an uncertain telecom future. A Maxis spin-off called Thinking Tools in Monterey, Calif., is working with Coopers & Lybrand Consulting, Pacific Telesis, and Nynex on a program called Telesim, due out later this year. "These telephone executives have no experience competing," says Andrew Zimmerman, head Coopers' infocom unit. "they've got to learn how."

THINKER TOY: *Telesim image*

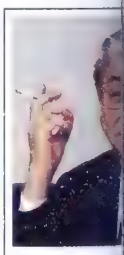
Telesim has players act phone-company CEOs, mak such choices as whether to vest in cable or wireless. C tomers, competing compan and regulators keep th jumping. And on the wall their cyberspace offices i sailboat painting. Do well, a sails fill with wind. Fail, a the boat sinks. *John Ve*

SLUGFESTS

NTT: BREAKING UP IS HARD TO DO

Nippon Telegraph & Telephone executives keep beating back the powerful political forces seeking to break up the company. Recently, the champion of keeping Japan's telecom giant intact, NTT President Masashi Kojima, withstood the opposition of government bureaucrats and won a guarantee to keep his job for at least another two years. Kojima's success is remarkable because the gove ment owns 60% of NTT.

Kojima, 62, argues t only NTT can take on hu projects such as laying fib optic networks. And he bolstered his position by pa nerships with U. S. allies, including Microsoft. The critical factor in Kojima's latest victory: Japan's ruling coalition froze local phone rates to boost its popularity. The Ministry of Posts & Te communications had plann to offer NTT a rate hike i dumped Kojima, but t freeze undercut the agency

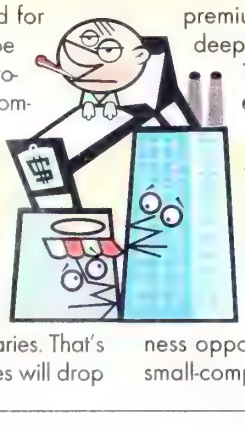


KOJIMA: *P multimedia*

Having won the battle, H jima may lose the war. T bureaucrats will keep tryi to break NTT into smal units, feeling that the gia moves too slowly. A gove ment review panel is to m next year on that. Meanwh the rate freeze will stu NTT's earnings. *Neil Gr*

REALITY CHECK

POLITICIANS SAY that giving small businesses a break on health-care reform is an economic plus. Small companies, noted for their job-creating prowess, wouldn't be hobbled by costly health premiums. Proposals on Capitol Hill would exempt companies with 75 or fewer employees from the mandate that employers pay 80% of workers' premiums. Instead, small outfits could buy deeply discounted coverage, paying only 1% to 2% of payroll, while the smallest could skip insuring workers at all.



IN REALITY, the overall benefit of such schemes is dubious because they likely would shift costs to large corporations. If only big business is required to insure, Wyatt consultants project that big-company plans will pick up an extra 14.1 million beneficiaries. That's partly because lots of small companies will drop their coverage—and legions of their workers will go onto spouses' plans at big corporations. Even the political appeal of small-business breaks is suspect. Lobbies such as the National Federation of Independent Business oppose any employer mandate, despite small-company exemptions. *Mike McNamee*

(CLOCKWISE FROM RIGHT) PHOTOGRAPH BY GUNNAR; TOMO MIURA ILLUSTRATION BY CHIP WASS; PHOTOGRAPH BY JOSE LUIS VILLEGAS/ SACRAMENTO BEE

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Up Front

FOOD FIGHTS

WATCH WHAT YOU SAY ABOUT MY RUTABAGA

Hate broccoli? Strawberries make you sick? Better beware what you say about such products: Libeling legumes and other growing things could get you sued for big money.

Call it revenge of the vegetarians. States including Alabama, Georgia, Idaho, and Louisiana have passed what lawmakers call "vegetable disparagement" laws. The movement is becoming widespread. Similar bills were considered recently in Washington, Mississippi, and South Carolina.

Intended to protect local farmers, a new Florida law is pretty typical: It allows growers to sue anyone who publicly declares that the state's fruits, vegetables, and other "perishable" food items are unsafe to eat—if the claim can't be backed up with scientific proof. The Florida law goes so far as to authorize both punitive and triple damages for intentionally badmouthing its bounty.

Such veggie protection laws grew out of the 1989 Alar scare in Washington State. Unproven claims about the chemical's safety cost the apple industry alone some $100 million as panicked consumers stopped buying.

Farmers across the country argue that they need the extra protections. Environmentalists and civil liberties advocates, however, say the disparagement laws offend free-speech rights and are unconstitutional. This question is coming to a head: A lawsuit seeking to have the Georgia law thrown out could decide the issue. Until then, you broccoli-bashers out there take heed. *Michele Galen*

THE BIG PICTURE

AMERICAN PIE

Most U.S. consumers buy American. And a significant group thinks made-in-Japan means quality. But how many believe country of origin, whether American or foreign, is a key factor? It depends on the product.

DATA: GALLUP ORGANIZATION, INTERNATIONAL MASS RETAIL ASSN

DRAWN AND QUARTERED

CREDITWORTHY

CARD-CARRYING JERSEYANS

South Orange, N.J., a bucolic suburb of 17,000, is poised to join the ranks of affinity credit-card issuers. That's a rare, and perhaps unique, position for a municipality. Village President Bill Calabrese calculates that, if 2,500 residents use the South Orange MasterCard, the town could rake in $75,000 to $150,000 annually—a decent addition to its $16 million 1993-94 budget. The extra money could hold down property taxes, rising at a 5%-per-year clip, and its downtown renovation.

With an affinity card, organization gets a cut of proceeds every time its m bers make a charge. South Orange card, wh Maryland's Chevy Chase B is expected to issue, has 11.9% rate.

Will it work? Robert Kinley, who tracks the c industry for RAM Researc Frederick, Md., says many finity cards flop. The E Foundation dropped its c in 1991 after three years. many members didn't their bills. Calabrese thi his citizens are better cr risks.

THE SPORTING LIFE

A SEAT SWITCHEROO AT THE WORLD CUP?

Talk about a kick in the head. More than a year ago, Anton Naunheimer of Chicago bought the highest-priced tickets available for the five opening games of World Cup soccer beginning in the Windy City on June 17. Paying $400 for a five-ticket block, he expected a commanding view of the action, somewhere in the heart of Soldier Field. But when his tickets arrived recently, Naunheimer found himself stuck behind the goal line, just down the aisle from the cheap seats—$150 per block. His plight may be shared by thousands of other miffed fans.

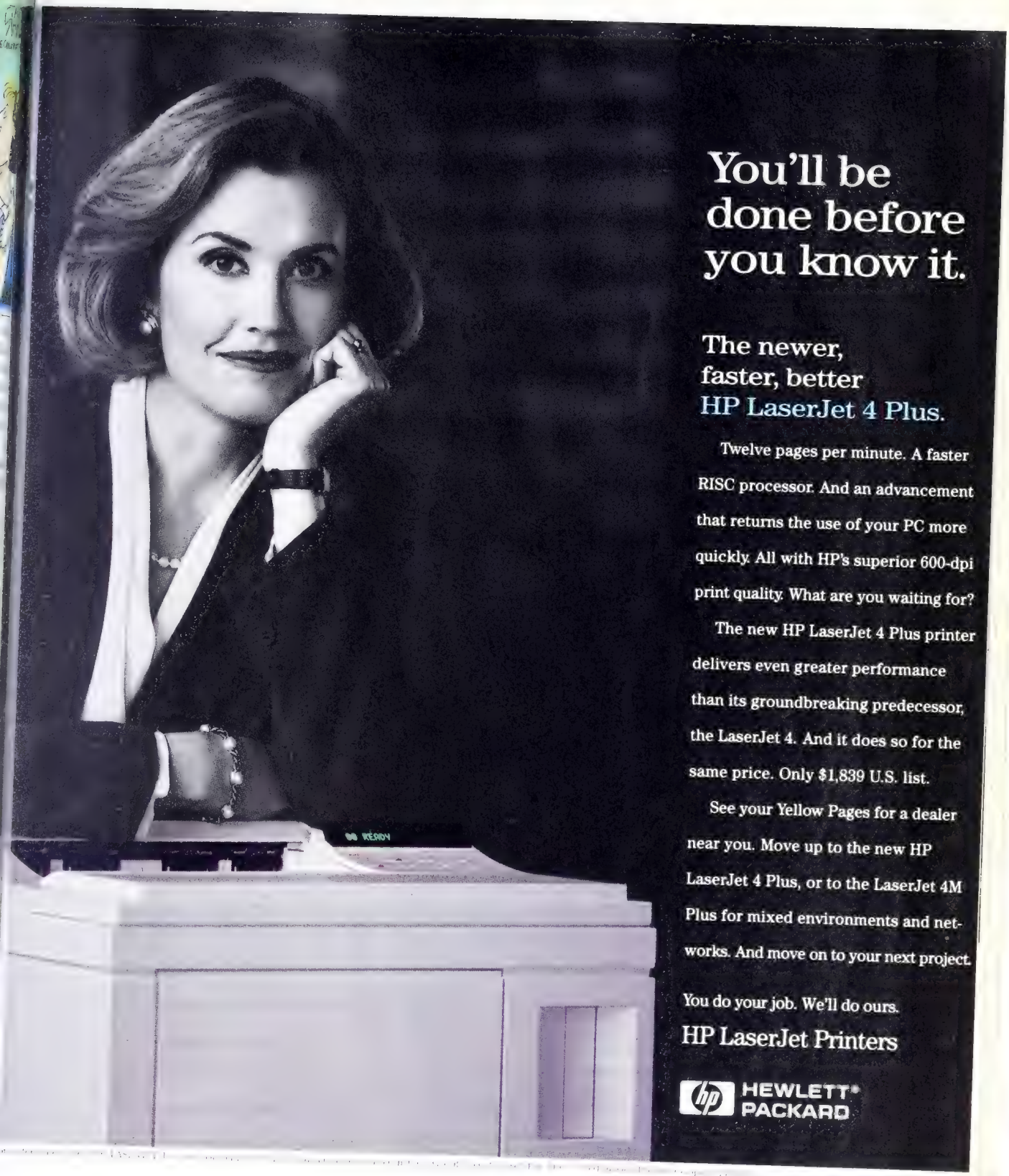
The organizers pulled a stadium-seat switcheroo, Naunheimer alleges in a class-action suit seeking unspecified money damages. Although World Cup promoters promised sideline seats to those placing orders for top-dollar tickets a year ago, it has since expanded "premium" sections to include corners and end zones as well, the suit alleges.

Organizers won't comment or say if "premium" sections were redrawn. A spokesman notes that si stadiums fer, it' judgme call wh good se end. He s the number complaints been "very, v small"—represent 0.5% of the 3.5 mill tickets sold. But tha 17,500 tickets, which li ly represents thousands buyers.

Naunheimer, an Austri born engineer, won't acce the explanation. "Doling these tickets can't be that ficult. I'm being cheated a defrauded," he says. Nau heimer still plans to atte the games. At least he'll ha a commanding view of t corner kicks. *Greg Bu*

FOOTNOTES

New musicals on Broadway, 1993-94 season: **6**; new nonmusicals: **12**. New musicals, 1968-69: **13**; new nonmusicals: **55**



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Readers Report

HEINZ SETS THE RECORD STRAIGHT

We are disturbed by the number of basic errors in your article "The new life of O'Reilly" (People, June 13). The following are some examples:

■ Your report that William R. Johnson is "still not on the board" of directors despite the fact that he and William C. Springer were nominated in last year's proxy and elected at last September's annual meeting.

■ U. S. consumers have "turned away from the company's premium price brands." The market shares of our big brands in Ore-Ida, StarKist, 9-Lives, and Heinz ketchup have increased. Overseas, Plasmon and Heinz baby food in the U. K., Canada, Australia, and New Zealand have also grown. Heinz has 18 power brands around the world, each with over $100 million in sales. O'Reilly clearly did not "concede" that our brand-oriented strategy isn't working when it clearly is.

■ In his interview, O'Reilly twice confirmed that he had been rocked by an earthquake in Bombay, but you reported him in Calcutta, 1,000 miles away.

■ You describe food service as "deadly dull." What is "deadly dull" about 5% growth per year and, when on any given day, half the adult population is dining on food-service products.

■ Regarding baby food, you omit pointing out that Sandoz' acquisition of Gerber for 30 times earnings actually validates our previously announced baby food growth strategy. You write, "Heinz will likely feel the heat first in Sandoz' home territory—countries such as Switzerland and France." Suffice to say, Heinz does not compete in these two countries.

■ You report that the Kathleen Sullivan winter TV ad campaign "bombed." Lower Weight Watchers attendance last winter was due primarily to the worst winter in years and the California earthquake. Attendance has, in fact, shown a positive response to the Kathleen Sullivan campaign post-Easter.

■ Fourteen Research Corp. is not one of our "largest institutional shareholders."

Although we would welcome it as a shareholder, current listings of our institutional shareholders don't include it.

Ted Smy
Vice-President, Corporate Affa
H. J. Heinz
Pittsbur

Editor's note: The Heinz story contain a number of errors. The story was wro regarding Johnson's board service, t site of the earthquake, and Heinz's pr ence in Switzerland and France. Oth errors were an assertion that the inve ment by O'Reilly's Fitzwilton PLC in W terford Wedgwood is its largest (It No. 2) and the statement that O'Reilly a director of General Electric Co. (He a director of an unrelated U.K. compa General Electric Co. PLC). The menti of Fourteen Research Corp., which f lowed a sentence quoting an uniden fied institutional investor, wasn't inten ed to assert that Fourteen Research is investor.

CORRECTIONS & CLARIFICATIONS

Contrary to the assertion in "MCI c lects on 1-800-C-O-L-L-E-C-T" (Info mation Processing, June 13), MCI d not charge callers who misdialed number for rival AT&T and reach MCI instead.

Sears, Roebuck & Co. says that a though it is reviewing its desktop o erating system, it is not, as stated "IBM rides into Microsoft country" (I formation Processing, June 6), pla ning to stop using IBM's OS/2 softwa on the 5,000 computers in its mercha dise group.

ANGLES ON JUDGING DESIGN

Congratulations to Bruce Nussbau for showing us just how subjecti design competitions can be ("Winners Annual Design Awards, June 6). While applaud the efforts of BUSINESS WEE and the Industrial Designers Society America to intelligently review design impact on business, it is somewhat iro

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t each year it is left to the subjec-
udgment of a handful of designers
the business community what is
and what is bad design. While this
jury may have been unusually di-
I am certain that it's not the first
he "pragmatists" battled the "de-
esthetes" for superiority.

William H. Faust
Vice-President
Fitch Inc.
Columbus, Ohio

IFYING CALPERS' ROLE ISE CASCADE

ating that Dale Hanson of the Cal-
nia Public Employees' Retirement
m "played a role . . . in the early
ment of Boise Cascade's John
BUSINESS WEEK erred ("Corporate
rs can breathe easier," In Busi-
This Week, May 30). It's implied
Fery was pressured by Boise Cas-
board to retire.
y's decision to retire was his alone
pproved by the board. It was a
on he postponed for several years
he led the company's fight to min-
the effects of depressed prices for
y grades of paper.
y has provided outstanding leader-
o Boise Cascade Corp. during his
ars as CEO. When he steps down
ly 29, he will have guided the com-
through the most difficult econom-
iod in its history and prepared it
ofit from a recovery in paper pric-
hich we have reason to believe is
way.

Anne L. Armstrong, Chairman
Committee of Outside Directors
Boise Cascade Corp.
Armstrong, Tex.

*r's note: BUSINESS WEEK never in-
d to imply that Boise Cascade's
l pressured Fery to retire early.
1992, however, CalPERS has been
critical of the company, and Han-
as met with management and some
outside directors.*

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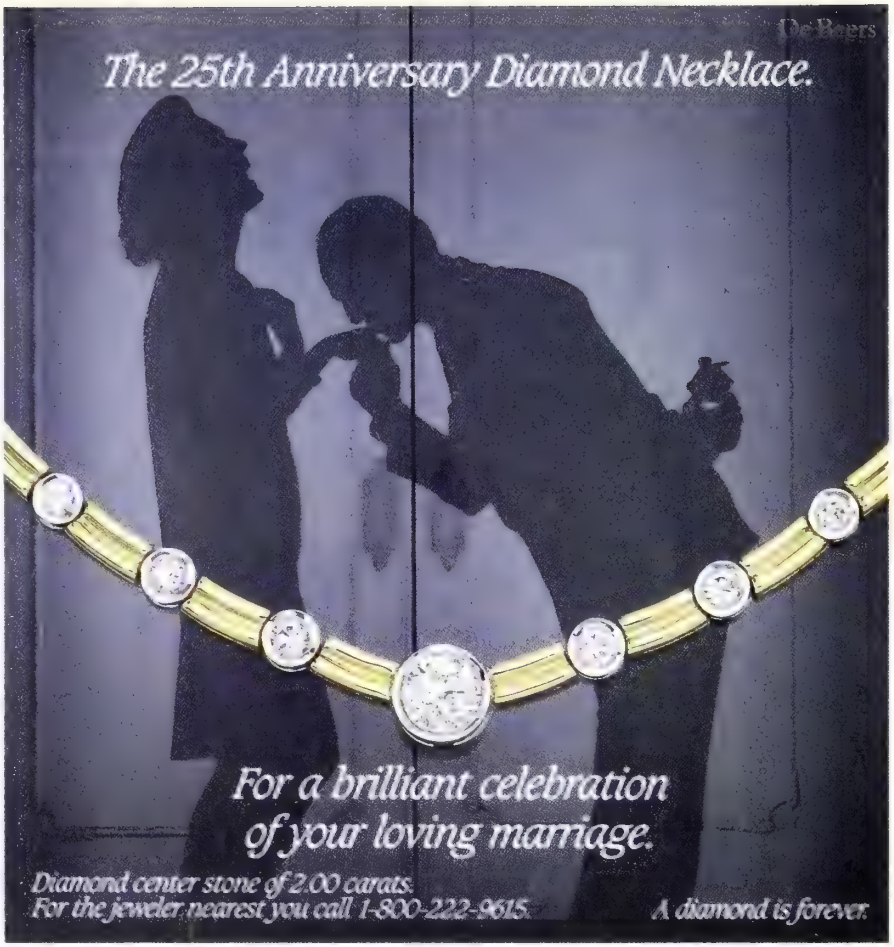

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WHEN CALCULATORS CAN BE A REAL PLUS

Click on the right icon when using Windows or a Mac, and a familiar image will appear on the screen: a calculator, ready to solve your math problems at the click of a mouse.

Why is this bit of retro-technology kept readily at hand in leading-edge software? Because for many everyday math chores, a calculator is a much better tool than a computer—and a real calculator is easier to use than an on-screen simulation. You probably use a calculator to balance your checkbook or tote up your expense report. For many financial computations, a specialized business calculator is just the thing.

Say you're thinking about buying a 10-year bond that's callable in five years, meaning the issuer can pay the bond off even if you'd just as soon keep getting the interest until it matures. The security carries a 6¾% coupon and is priced at 98¼. How does the yield to maturity compare with the yield to call? Working this out with a pad and pencil would give most people a headache. Using a spreadsheet such as Lotus 1-2-3 is only a bit easier. But on a financial calculator, such as the Hewlett-Packard 19B II Business Consultant, you just follow the menus.

Computers are ideal for repetitive tasks. If you trade bonds or do cash-flow analysis regularly, you can use a spreadsheet template setup for the job. But the calculator is the king of the one-shot job. As long as your computation fits one of the many programs built into the device, all the difficult setup work has already been done for you.

HP offers the cream of the crop in business calculators. Its top-of-the-line 19B II (list price $175) and the $110 17B II can handle a wide range of financial and statistical challenges. While the two units have similar capabilities and can send a hard copy of their work to a printer ($135) over a wireless link, a bigger display, full alphabetic keypad, and better key layout make the more expensive and slightly larger 19B II worth the extra cost.

The feature that can quickly make you an expert user of advanced features is a row of six "soft keys" across the top of the keypad. The labels that appear above these keys change as you go through the menus. For example, when you first turn the unit on, the rightmost soft key is labeled "FIN" for "financial." Press it, and the label changes to "TVM" for time value of money, then "N" for the number of periods.

You can also program the calculators to handle virtually any financial or statistical computation with one touch. But unless you need the portability of a calculator you can slip into your pocket, you'll probably find it easier and faster to save your specialized calculations for a spreadsheet on your computer.

PROBLEM SOLVER. The HP calculators have been around since 1990, but they only show their age in a few insignificant ways. For example, the list of available depreciation methods includes the accelerated cost recovery system, which was chucked out of the tax code in 1986. But the units can handle all depreciation methods allowed by current tax law and accounting practices. The instruction books are also a bit dated, with examples featuring prodigious interest rates that will bring back memories of the bad old days.

If you want a financial calculator but don't need the power of the HPs, consider Texas Instruments' Business Analyst line. The $39 BA II Plus can handle most of the functions of the HP, though it's nowhere near as easy to use. For $10 more, you can get a version that specializes in real estate calculations.

Calculators may lack the high-tech appeal of the latest Pentium computer. But turning to your computer for basic tasks is like using a chainsaw to prune roses. The right tool for the job isn't always the most powerful. *S.W.*

FOUR SOLID CALCULATORS

Maker/Model	List price
HEWLETT-PACKARD (Shown) Business Consultant 19B II	$175
HEWLETT-PACKARD 17B II Financial	$110
TEXAS INSTRUMENTS Business Analyst BA II Plus	$39
TEXAS INSTRUMENTS BA Real Estate	$49

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THE AGENDA: INSIDE THE CLINTON WHITE HOUSE
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THE STORY THAT WOODWARD DIDN'T GET

Bob Woodward is building a reputation as the Proust of policy wonks. His latest effort details—down to the last Frito—the Clinton Administration's 1993 battle of the budget. Woodward recounts the White House's inner struggle over whether to ditch Clinton's campaign promise to cut taxes for the middle class. He lays out just how the President abandoned that pledge and instead spent precious political capital on tax hikes and deficit reduction.

The focus of *The Agenda: Inside the Clinton White House* is entirely process. This is nothing but sausage-making—the tale of a bunch of white guys who stay up late arguing about the relative merits of the gas tax vs. a broad-based energy tax. There is no analysis and no sense of a world beyond Pennsylvania Avenue. Woodward just recreates life in the abattoir.

The reporting is admirable. As always, Woodward, who interviewed more than 250 people, displays an amazing ability to get his sources to say things they shouldn't. He accomplishes that in part by guaranteeing them anonymity. But the complete lack of sourcing makes it difficult to judge his veracity.

Woodward kicks off with some pillow talk between the Clintons in the summer of 1991—Hillary urging Bill to run for President. It's an old journalist's trick: When you don't have real news, dazzle 'em with the details. Wow, the reader will say, he even got into bed with the President and the First Lady.

The book has three major flaws. The first is that it breaks little ground. We learn that the White House under Chief of Staff Thomas F. "Mack" McLarty III is a disorganized mess, that Bill Clinton has a volcanic temper, and that Hillary Rodham Clinton is a powerful force. We discover that Clinton's political advisers struggled, but failed, to keep his focus on the middle-class tax cut. And we learn that Alan Greenspan wanted the new Administration to cut the deficit. Any careful reader of the daily newspaper has known these things for 18 months.

The second problem is that Woodward does nothing to put the goings-on in the Clinton White House in historical context. Veterans of the Reagan Administration are chuckling aloud at Woodward's account of in-fighting among the Clintonites. To them, these disputes are schoolyard squabbles.

Policy disagreements? Nothing here compares with 1982, when top Treasury aides were secretly negotiating with Congress over a massive tax hike, even as the Gipper, in blissful ignorance, was extolling the previous year's tax cut.

Volcanic temper? As far as we know, Clinton isn't bugging the home phones of his own aides, as Richard M. Nixon, enraged about press leaks, did.

Ego battles among staffers? Woodward gives us nothing that compares with the behavior of Bush's budget director, Richard G. Darman, who set out to do no less than destroy all those who disagreed with him. Indeed, any longtime observer of the Washington scene will tell you that the Clintonites seem remarkably cohesive, at least compared with their predecessors.

But the biggest flaw of all is Woodward's theory of how Clinton came to abandon a middle-class tax cut in favor of deficit reduction. He postulates that Clinton became a deficit hawk largely because of pressure from Federal Reserve Board Chairman Greenspan. But that was only part of the story.

For all the attention given Greenspan's role in news stories about the book, *The Agenda* details a grand total of four meetings between Clinton and the Fed chairman, one of which took place well after passage of the deficit-reduction plan. And at each, Clinton heard little more than the speech Greenspan had been giving for years, filled with dire warnings about the risks of continued high deficits. Greenspan made no promises. There was no quid pro quo—at least none that Woodward discovers. Greenspan merely warned that real long-term rates would remain high unless the deficit was brought under control.

It's not as if Greenspan was the only one pushing Clinton to tackle the deficit. The new President was feeling tremendous pressure to act from his own economic team, including senior adviser Robert E. Rubin, Treasury Secretary Lloyd M. Bentsen and Budget Director Leon E. Panetta. At the same time, much of Congress and the political ghost of Ross Perot were forming a powerful Greek chorus chanting from the wings "Cut the deficit."

Then there was the bond market. The Clintonites got their first whiff of that world even before the election—in October 1992. The market finally figured out that the Democrats would probably win and, at the same time, got wind of a rumor that Clinton would push an $80 billion stimulus plan. Not surprisingly, the market tanked, throwing a real scare into the economic team-to-be.

In the end, though, Clinton cut the deficit because he had no choice. Even during the campaign, there was a sense of inevitability about the need to focus on budget-cutting. It took the Washington pundits months to figure this out, but the public had it nailed from the first. Voters never believed Clinton's promise to cut taxes, which the Democratic candidate spent the last weeks of his campaign backtracking on, anyway.

It wasn't because Clinton didn't want to cut taxes. He did. But he knew that like Bush, Reagan, and Carter before him, he would be defined in large part by the budget issue. He had to tackle

While the Clintonites argued, the deficit and the bond markets wrote the budget

icit in his first days, because if he , his entire Administration would een haunted by the failure.
tta and Bentsen had been say- years that the biggest danger deficit was not the short-term ec- cost, but the way it crippled pol- ing. And that would never have nore true than for Bill Clinton, ment activist. Health care, wel- form, trade: Each of these pro- will cost money. Even today, Clin- struggling to come up with ways for them. Imagine what his life be like if every time he raised those issues, half the Democrats the Republicans on Capitol Hill howling about the out-of-control He would become, like George a prisoner of the budget debate. is, the deficit is still more than llion. Yet it is largely a nonissue, to the tough choices Clinton n his first days in office.
dward, the earnest stenographer, all this. But he does capture Clin- nself—always questioning, never t, desperately seeking one last ost of all, Woodward's Clinton is a ho can't abide making enemies, lways looks to find a middle

book also captures the White s growing obsession with the bond t. In Woodward's telling, young s, many self-styled populists, found elves suddenly mesmerized by urves and basis points.
t fascination with interest rates cs. But circumstances have d. The budget debate took place nvironment of falling rates. Now, ne expansion well along, long rates gain headed up—back to where vere when Clinton took office. So spite occasional bursts of frustra- he Clintonites grin and bear it. span's Fed raises rates, and Clin- White House, which bet early and on the stimulus of monetary poli- ies for the best. Clinton lived by nomy in 1992 and 1993. And he'll die by the economy in 1996.
ause he is interested only in pro- Woodward misses a final, delicious In his campaign, Clinton prom- o cut taxes, hike spending, and ate the economy. Instead, he taxes by $250 billion over five –and watched in amazement as onomy boomed, an outcome that e adviser had predicted. If nothing Clinton's experience reinforces an w of politics. It is, indeed, better lucky than good.

BY HOWARD GLECKMAN

ior Correspondent Gleckman has vatching Presidents struggle with ficit for 20 years.

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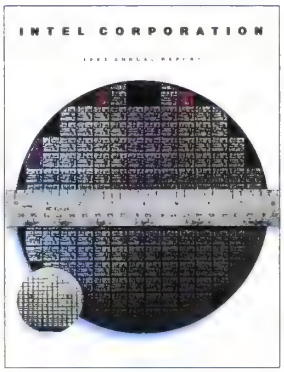

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SURE, FIGHT INEQUALITY, BUT SET THE MARKETS FREE

BY RUDI DORNBUSCH

In emerging nations, laissez-faire rapidly sparks growth—and democracy. The state should concentrate on financial stability and policies that promote equal opportunity for all

South Africa's new political constellation should move along the same liberal track as India and Argentina: shock-treatment stabilization, uncompromising elimination of pervasive big government, deregulation, and opening of the economy to achieve free markets.

I use liberal here in the European sense of the laissez-faire of unfettered markets, not the Massachusetts left sense of "I am from the government, I am here to help you." We economists call it neoliberalism. But by whatever name, by itself it is not enough. Societies cannot function by rat race alone. There is a need for policies and laws that mitigate inequality. Striking the correct balance between free markets and a role for the state to assure the prerequisites for social stability and progress is tricky: Chile is a winner, while Russia and Brazil, with their uncontrolled free-for-all, are dysfunctional.

The experience of the past decade is that where governments allow markets and people to decentralize decisions, progress comes about surprisingly fast. Moreover, democracy flourishes. Just look at the success of the new Czech Republic. But the question of the correct economic model is as acute as ever. Here are four examples:

■ In Brazil's forthcoming elections, the voters must choose between a traditional elite, which by now supports a watered-down liberal agenda, and the stark challenge of a left-wing candidate, Luís Inácio Lula da Silva, whose single message is social justice. Lula is no fool. He correctly likens Brazil to South Africa, with 80% of Brazilians politically and economically left out. Putting them at the center of politics is his priority. Unfortunately, he proposes to accomplish this with outworn models of big government: a closed economy, no attention to stable finance, and the familiar emphasis on wages. The last time we heard that siren song, the singer was Alain García in Peru, and before that, Salvador Allende in Chile.

Even so, Lula isn't the greatest threat to the Brazilian economy. The elite is responsible for the prevailing hyperinflation. Measured by the havoc it has caused to date, the elite is even more of a threat. Brazil needs stabilization and reform, but much of the reform must be directed at social progress.

■ In Venezuela, President Rafael Caldera Rodríguez won office as a compromise candidate and has tried to govern in the same way, fudging here and there, using populist models of the 1950s. Even before he was sworn in, Caldera questioned the need to service the country's external debt at a time when large deficits had to be financed by new bor ing. Tax reform and opening up the econ were put on hold. Caldera has learned a lessons since then, but not the central on political leader cannot hide from taking central responsibility for reform and mod ization. Argentine President Carlos Me boldly turned from populism to neoliberal And his gamble paid off: The constitution changed to allow him another term. Cal should follow Menem's example.

■ Indian Finance Minister Manmohan Si has nudged the giant subcontinent onto a of neoliberal reform. India's tradition is a ture of London School of Economics socia and postcolonial economic nationalism. A u uitous administrative bureaucracy and overzealous legal system stifled experime tion and innovation. Until recently, the Co a car model of the 1950s, was the only th on four wheels in India. Although Singh's economic model still is encountering re tance, India's 800 million people are break out of extreme poverty and stagnation as t are allowed to use their ingenuity and an tion to get ahead. India is beyond the p where the experiment can be called off.

■ In Ukraine, extreme inflation and the lapse of the state-run economy have hal output in the past five years. The Czech m el of stable public finance and an open ec my is not accepted. President Leonid Kr chuk, without any principles other than cling to power, is preoccupied with survivin July election. And then what? Without an yielding commitment to reform, Ukraine slip into economic and political chaos. That threat not only to the 52 million Ukraini but to all of Europe. Uncompromising refo and stabilization, however difficult, are only way out.

In 1948, when the postwar West Gern economy was stymied by price controls, E nomics Minister Ludwig Erhard used a ment when the Allied supervisors were watching to remove all controls. The occupy Allied leaders were shocked. "Herr Erha my advisers tell me you are making a t rible mistake," expostulated U. S. General cius Clay. "Don't listen to them," repl Erhard. "My advisers tell me the sam The bold step liberated the economy a freed West Germany to move on a path prosperity.

The maintenance of financial stability a the mitigation of inequality are the pro roles of the state—nobody else can do th jobs. Everything else the markets can do b ter, including in South Africa.

RUDI DORNBUSCH IS PROFESSOR OF ECONOMICS AT MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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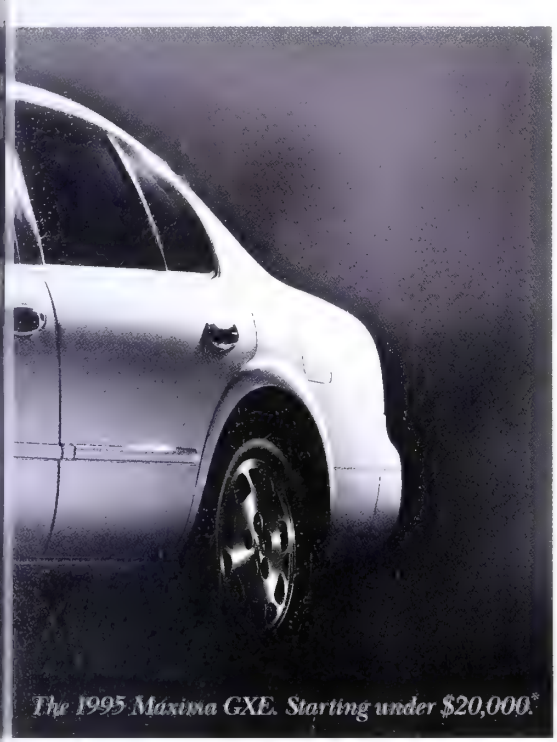

*The 1995 Maxima GXE. Starting under $20,000.**

zing V6 engine that generates 30 more standard epower (for a grand total of 190 hp) and gets better fuel economy (21 mpg city/28 mpg high-) than its predecessor.†† For those keeping score at e, all this equates to scorching 0-60 times that faster than a 1994 Acura Legend LS and a Lexus 300 while getting gas mileage that's equal to the far less powerful four-cylinder Toyota Camry.††

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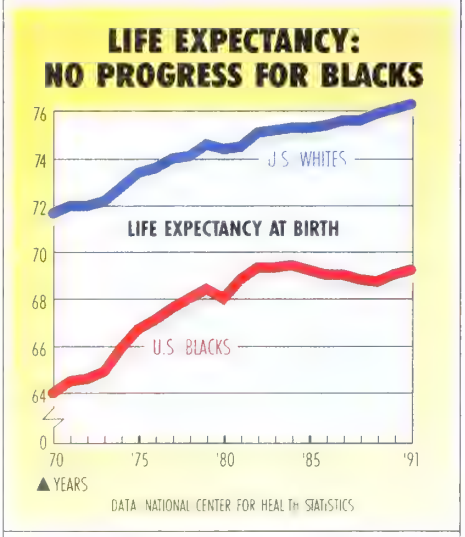
BY GENE KORETZ

U.S. DEATH RATES: ANOTHER SOCIAL GAP IS WIDENING...

In the 1980s, social observers lamented the growing income inequality in the U. S. Now, attention is being drawn to a parallel trend: a widening gap in mortality rates between the middle class and the poor.

In a study summarized in the latest issue of Metropolitan Life Insurance Co.'s *Statistical Bulletin*, researchers Susan Queen, Gregory Pappas, Wilbur Hadden, and Gail Fisher of the National Center for Health Statistics compared death rates among different income and education groups for 1960 and 1986 (the latest data available). They found that death rates among better-educated and higher-income Americans have fallen far faster than rates for high school dropouts and the poor.



From 1960 to 1986, for example, the age-adjusted mortality rate plunged 50%, to 2.8 per 1,000 population, among white male college grads aged 25 to 64 but fell just 15%, to 7.6 per 1,000, for similar high school dropouts. In 1986, the death rate for white men with incomes less than $9,000 was 16 per 1,000, compared with 2.4 for those earning $25,000 or more. The patterns were similar among black men, but somewhat less dramatic among women overall.

The trend since 1986 won't be known until a similar 1993 survey is analyzed. But it's noteworthy that life expectancy (a figure derived from mortality rates) actually declined among blacks in the late 1980s, while white life expectancy continued to improve (chart). Given that more blacks live in poverty and that real pay of low-wage workers of all races fell during the decade, it seems unlikely that the divide between socioeconomic groups narrowed.

The U. S. isn't the only country where the middle and upper classes have made far bigger gains in life expectancy than the poor. Similar trends have been reported in Britain, France, and Hungary. Indeed, a recent survey in the *British Medical Journal* suggests that life expectancy among some of Britain's poor may have declined to levels last seen in the 1950s.

...AND TOBACCO IS ONE OF THE BIG CULPRITS

Among the many factors contributing to the indifferent health of low-income Americans, notes economist Jeffrey E. Harris of Massachusetts Institute of Technology, is the prevalence of smoking. "Cigarette smoking is now responsible for a fifth of all deaths in the U. S. annually, and the poor are the heaviest smokers," he says.

Some 35% of American adults below the poverty line are regular smokers, compared with just 20% of those from households with incomes above $50,000. Harris, who is a physician as well as an economist, estimates that lifelong smokers live seven years less on average than nonsmokers. In addition, secondary smoke harms children and other nonsmokers in a household.

Similarly, smoking is more prevalent among blacks than among whites—and blacks have higher death rates from smoking-related diseases. For example, 86% of deaths from lung cancer are attributed to smoking, and blacks' death rates for this ailment are more than twice those of whites.

Such stark statistics are one reason many health groups are calling for a $2 increase in the federal cigarette tax. To be sure, such a hike would hurt poor people who continue to smoke more than it would higher-income smokers. On average, a household with two adults each smoking a pack and a half a day now shells out nearly $2,100 a year for cigarettes, and a $2 tax hike would raise it to $4,200. But economists argue that the regressiveness of the tax would enhance its effectiveness in curbing smoking.

"Health information sways the more affluent and educated," says Harris, "while the poor are more concerned about costs." And although the proposed hike would be regressive, the benefits of quitting are progressive: In other wor the poor, who suffer the most from bacco use, are the most likely to i prove their health by kicking the hal

GERMAN BANKS ARE NOT SUCH ALERT WATCHDOGS AFTER ALL

How could it happen? After bei rocked by the bankruptcy of r estate developer Jürgen Schneider a by Metallgesellschaft's $1.5 billion trading loss earlier this year, Germ banks are now facing the failure Balsam, an international manufactur of artificial surfaces for sports faciliti with debts of $900 million.

The conventional view is that G many's bank-based system of investme finance prevents such scandals, sin banks not only take equity positions companies they lend to but also sit advisory boards. A recent study economists Jeremy Edwards of Ca bridge University and Klaus Fischer London's Centre for Economic Poli Research, however, suggests that t banks' role is overstated.

German banks, they report, finan no more corporate investment th banks in the U. S. or Britain, and the equity stakes amount to only 3% of t value of bank loans to the nonfinanc sector. Moreover, German banks usual secure their loans with collateral, ther by lessening their incentive to monit companies closely.

Thus, the view that close bank supe vision helps ensure the sound perfo mance of big corporations seems exa gerated. These days, a lot of Germa banks would probably agree.

ROBUST AMERICA: A MAGNET FOR OVERSEA MONEY—AGAIN

Back in 1988, foreign investors pour more than $72.7 billion into the U. to buy or set up businesses. Then, ov the next four years, as recessions hit t U. S. and then spread overseas, the flo of such direct foreign investment slow by 79%, to just $15.3 billion in 1992.

Now, America's robust growth ar newfound competitiveness are turnir the tide once again. The Commer Dept. reports that foreign outlays to a quire companies or establish new bus nesses in the U.S. soared 71% last yea to $26.2 billion, with most of the ri plowed into the manufacturing sector.

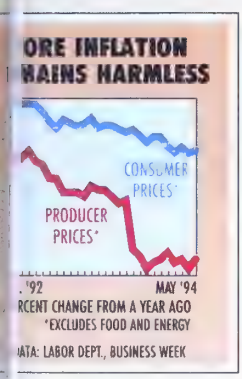
27, 1994

BY JAMES C. COOPER AND KATHLEEN MADIGAN

IIS EXPANSION HASN'T STALLED -IT'S JUST ON CRUISE CONTROL

he economy's downshift, now evident in most of the data, was likely even without the Federal Reserve's four taps on the brakes starting back in uary. Now, those four hikes in interest rates only assthat the slowing trend will continue. Of course, s the Fed's goal: to give the economy a smooth trip voiding a spike in inflation that could blow a tire wreck the expansion.

ght now, though, the radials are in little danger. umer price inflation remains benign, with the core –which excludes food and energy prices—running at owest level in more than two decades. And the May ings on retail sales, industrial production, and capacse point to slower growth in coming months, which keep price pressures at bay.



The consumer price index increased just 0.2% in May, and producer prices for finished goods fell by 0.1% last month. The core CPI rose a bit faster, edging up 0.3%, while core producer prices increased 0.4%. Tobacco and car prices lifted core inflation in May at both the retail and wholesale levels.

Still, over the past year, core inflation remains on a downtrend rt). Core consumer prices rose just 2.8% in the past 12 ths—the slowest inflation rate in 21 years. And produc- rices are little changed since last May.

ven further back in the production process, prices of ntermediate materials and supplies are up only 0.9% n a year ago. And the cost of crude materials is down as price declines in livestock, oil, and timber have offsteep increases in cotton and scrap metals.

IEDICAL NFLATION: OWEST IN O YEARS

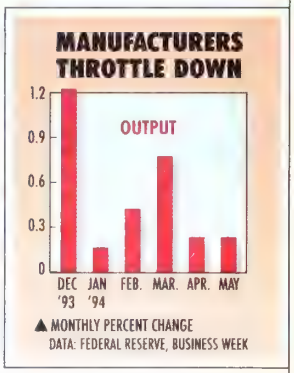
For consumers, the main components of the CPI show few signs that price pressures are beginning to build. In particular, medical inflation has come down sharply e its 9.6% pace of early 1990. In May, health-care ts were up 4.6% from a year ago, the mildest advance 20 years. The improvement is likely the result of two ors: Companies and insurers have successfully conled their costs, and medical-care suppliers have held line on price markups in the hope of lessening the ssure for health-care reform.

The service sector remains the place to look for inflationary stress. But even here, the pressures are few. The one area worth watching is a rise in the price of shelter, the result of healthier housing demand. The cost of shelter over the past six months has risen at an annual rate of 3.3%, up from 2.6% in the previous six months.

Since shelter is about 28% of the entire CPI, the pickup suggests that the growth in the CPI may be near the bottom for this cycle. However, the Commerce Dept. data show that consumers devote only about 14% of their spending to housing, suggesting that housing's inflationary impact on the economy as a whole is not that great.

That's not to say the road ahead is clear of price potholes. Because of the Labor Dept.'s new seasonal factors, which softened inflation's sting in the winter, there is a risk of a big monthly jump in the CPI this summer. That one-time gain would likely reverse itself later on, though.

More worrisome is the outlook for oil prices and the dollar. Members of the Organization of Petroleum Exporting Countries began their quarterly meeting on June 15 to set future production quotas, even as energy prices are on the rebound. The spot price for Brent crude oil has risen 18.1%, to $16.25 a barrel, since the end of March, when OPEC last met.



So, too, the weaker dollar exerts upward pressure on the prices of foreign-made goods. That's not an insignificant consideration for an economy that imports about one-quarter of all the nonpetroleum goods it buys. Indeed, prices of nonoil imports, which rose 0.4% in April, are up 2% during the past year, about twice as fast as in April, 1993.

EQUIPMENT MAKERS REMAIN BUSY

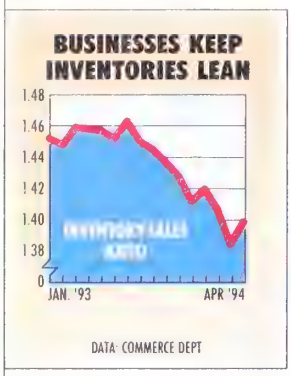
Of course, the May price performance says little about the future of inflation. The latest news from retailers and manufacturers, however, does signal that growth is slowing. That means the economy remains short of the point where strong demand and product shortages lead to a speedup in price hikes.

Industrial output increased by just 0.2% in May, and April's data were revised lower to show a gain of just 0.1% instead of 0.3%. Manufacturing production rose 0.2% in both April and May (chart), way below its advances in the preceding two months. So far this quarter, total indus-

ERIC HOFFMANN BW

trial production is growing at a 3.2% annual rate, less than half of its 8% clip in the first quarter.

Auto output fell 3.9% in May, the third consecutive decline as demand for cars and light trucks begins to taper off. Makers of business equipment remain busy, however. Output there rose a robust 0.9% in May, the 23rd consecutive monthly increase.



That uptrend reflects the spending spree on capital equipment. Businesses plan to increase their outlays for new plants and equipment by 8.3% this year, according to the Commerce Dept.'s spring survey of capital budgets. That advance would follow a 7.1% gain in 1993.

Companies are investing to improve productivity and lower unit-labor costs. Many are succeeding. The Labor Dept. says output per hour worked in the nonfarm business sector rose at an annual rate of 1.3% in the first quarter, higher than the 0.5% increase originally reported. As a result, unit-labor costs grew by 3.9%, instead of a 5% clip.

OPERATING RATES SLIPPED IN MAY

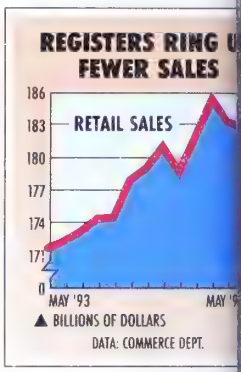
Clearly, better productivity is another reason to be optimistic about the inflation outlook. It also means that factories can operate at higher capacity-utilization rates without the danger of production bottlenecks. Industry used just 83.5% of its available capacity in May, down slightly from 83.6% in April.

Any increase in operating rates, as well as future gains in manufacturing output, will be tempered by the conservative management of inventories so far in this expansion (chart). Inventories at factories and at wholesale- and retail-trade companies rose 0.2% in April, as sales fell 0.8%. However, the ratio of inventories to sales edged up only slightly from its record low of 1.39 in March, to 1.40 April.

The slowdown in consumer spending will also keep dustrial production growing at a modest pace in the s ond half of 1994. In May, retail sales fell 0.2%, on top revised 1.1% drop in April (chart).

The May decline occurred entirely at car dealersh where receipts slipped 1.9%. Excluding autos, sales r 0.3%, hardly reversing the 0.7% falloff of April.

Furniture buying remained strong in May, rising 1. Demand for home-related durable goods will start to s this summer, though, as the increase in mortgage ra bites into housing. Receipts at gasoline stations, rest rants, and clothing stores all continued to fall last mo



So far in the second quarter, retail sales adjusted for inflation are about flat with their average of the first quarter, when they grew at a fast 5.4%. The latest news for June, however, shows that stores were a bit busier this month.

The *Johnson Redbook Report*, published by Lynch, Jones & Ryan Inc., says that sales at department and chain stores rose 3.6% in the first two weeks of June from May. That's c siderably more optimistic than the chain-store sales ind compiled jointly by Mitsubishi Bank Ltd. and Werthe Schroder & Co., which shows sales up 0.8% in the sa period.

A more modest pace of consumer demand is crucial the downshift in growth overall. Certainly, the slow pace of jobs is not welcome news for those who are out work, and some companies may suffer from the drop business. But for the economy as a whole, cruising third gear is a whole lot better than driving into a di while trying to dodge inflation.

THE WEEK AHEAD

TRADE BALANCE

Tuesday, June 21, 8:30 a.m.

The U. S. trade deficit for goods and services probably widened slightly in April, to $7.8 billion, from $7.4 billion in March, according to the median forecast of economists surveyed by MMS International, a division of McGraw-Hill Inc. For goods alone, the deficit likely widened to $10.5 billion from $10.1 billion in March. Merchandise exports probably fell back in April after hitting a record $43 billion in March. At the same time, though, the MMS forecast is that imports were little changed in April after also setting a new high in March, at $53.1 billion. The flood of imported merchandise will continue to be a drag on U. S. economic growth.

FEDERAL BUDGET

Tuesday, June 21

The U. S. government will likely post a $34.8 billion deficit for May, not much better than the $37 billion of May, 1993. Still, the budget gap is set to shrink this fiscal year, which ends in September. The deficit will likely total $200 billion to $212 billion this year, down from $254.7 billion in 1993.

DURABLE GOODS ORDERS

Thursday, June 23, 8:30 a.m.

The MMS economists figure that new orders taken by durable-goods manufacturers increased a small 0.5% in May, ter dipping 0.1% in April. The backlog unfilled orders probably fell 0.6%, af rising 0.1% in April. The weakness demand reflects slower economic grow especially in sectors affected by the cent rise in interest rates.

UNEMPLOYMENT CLAIMS

Thursday, June 23, 8:30 a.m.

New claims for state unemployment b efits probably totaled about 355,000 the week that ended June 18. Tha only slightly below the 362,000-cla pace averaged in the four weeks th ended June 4. The number of jobl claims remains quite high consideri the quicker pace of job growth.

When the producer in L.A. gave her changes to the script via computer to the writer in New York, he looked confused, so she highlighted the revisions on his screen.

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MERCK FINALLY GETS ITS MAN

RAY GILMARTIN, ROLL UP YOUR SLEEVES

GILMARTIN BOASTS A SOLID TURNAROUND AT BECTON DICKINSON

Raymond V. Gilmartin still seems dazzled by it all. Scarcely three months ago, he was running Becton Dickinson & Co., a modest-sized manufacturer of medical equipment, when Spencer Stuart headhunter Tom Neff called with word of a chief executive's post opening up. "I said no, I was happy with what I was doing," Gilmartin recalls. And even after 18 years, he felt needed. Then, Neff whispered a single word: "Merck." Very quickly, Gilmartin decided that perhaps Becton could get by without him. After all, he says with characteristic humility, "Any one of us can be replaced."

On June 9, the corporate Cinderella story came to be. Ray Gilmartin, the 53-year-old son of a construction foreman, was anointed successor to Dr. P. Roy Vagelos as CEO and president of Merck & Co., the world's preeminent—if troubled—pharmaceutical company. Assuming all goes well, he will become chairman when Vagelos retires in November—the first outsider to take the top job in Merck's 103-year history.

The succession process was a torturous one. It took 18 months, and Merck lost three top executives along the way. In January, a group of tough-minded outside directors, recognizing that Merck's ills demanded new vision and drastic remedies, took control of the search. "Change has got to be a part of what's going on," says H. Brewster Atwater Jr., CEO of General Mills Inc. and chairman of Merck's search committee. Indeed, the board ultimately bypassed the "dream team" of talented senior managers assembled by Vagelos in favor of a relative unknown.

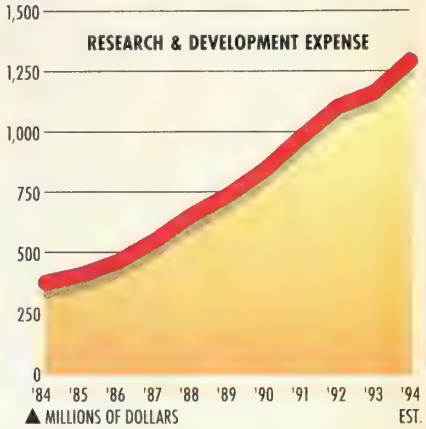
The question now: Did Merck pic the right guy? This is a company that two tumultuous years seems to hav lost the touch that made it one of the f vored growth stocks of the 1980s. Am turmoil in the health-care world, margi have suffered and profit growth ha drooped to about 12% a year. And th new-product cupboard is nearly bar Merck, in short, needs rescuing.

RISKY CHOICE. Gilmartin certainly has fine record. He wrestled with pricin pressure and industry restructuring decade ago and turned struggling Becto into a soundly profitable company. Man rivals and former associates agree he well suited to guide Merck and its recer $6.6 billion acquisition, distributor Medc Containment Services Inc., into the worl of managed care. "I've already bee through the kind of changes that ar

starting to affect the pharmaceutical
anies," Gilmartin says.
many ways, though, Gilmartin is a
and risky choice. An electrical engi-
with a Harvard MBA, he has no
industry experience. At $2.5 bil-
a year in sales, his commodity-
ted Becton is a far cry from histor-
innovative Merck, which this year
likely top $15 billion in sales.
ithout scientific credentials, more-
, Gilmartin won't readily step into
los' role as the industry's *éminence*
. The often aloof Vagelos has be-
the de facto industry spokesman
e Clinton Administration. Gilmartin
headed a trade association for in-
nent makers—and earlier this year
ely disagreed with Hillary Rodham
on in a panel discussion. But he is
ribed most often as a genial con-
us-builder. "He's a rather pleasant
idual and not an aggressive me-
ne type," says drug analyst Neil B.
ig of Ladenburg, Thalmann & Co.
won't be giving all that many
ches all over the world."
ost glaring, though, is Gilmartin's
inexperience with pharmaceutical
lopment—the single most important
to Merck's success over the next
de. The complex business of pro-
ng a new drug, with its cutting-edge
ice and dozen-year lead times, is
ues away from turning out new
eters, pregnancy tests, or even glit-
omputer-guided cell sorters. One
ng sign: Becton last year spent less
$140 million on research and de-
pment, a fraction of the $1.2 billion
ck spent in its global lab network.

ING FORCE. Gilmartin admits he has
understanding of this side of the
ness and isn't aware of shortcomings
Merck's research pipeline. "I really
t have any sense of that, other than
t] there's probably more potential
is apparent." But then, scientific
iance isn't what brought Gilmartin
Merck's attention. Rather, it was tec-
shifts in the marketplace: Where
makers could once set and raise their
es at will, they now must face man-
l-care buyers who play companies
nst one another to drive down prices.
fact, the need for expertise in the
aged-care world has been the pri-
y driving force in Merck's succes-
battle. Vagelos signaled that in late
, when he named a brash 42-year-old
keter, Richard J. Markham, as his
sident and heir apparent. Seven
ths later, Markham quit for still-un-
losed "personal" reasons, eventually
ing rival drugmaker Marion Merrell
as its president and No. 2 execu-

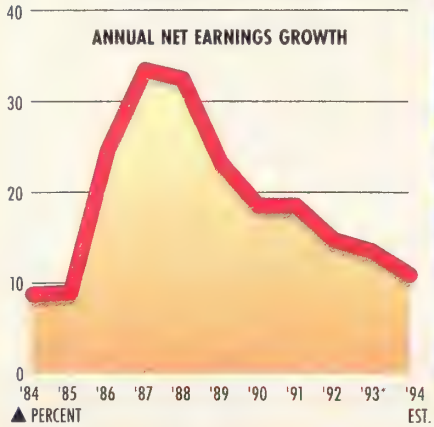
GILMARTIN'S CHALLENGE: MERCK'S R&D IS UP...



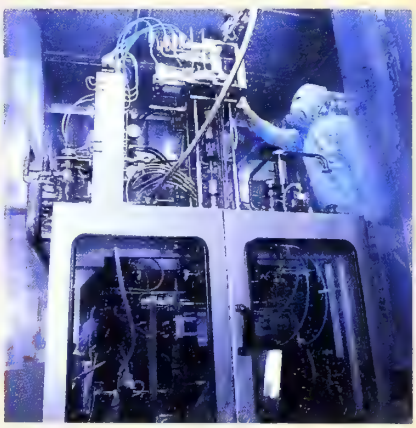
...BUT THE HIT DRUGS ARE COMING SLOWER...

PRODUCT/APPLICATION	INTRODUCTION	1993 SALES (MILLIONS)
PRIMAXIN I.V./ANTIBIOTIC	1985	$ 500-1,000
VASOTEC/CARDIOVASCULAR	1985	1,000+
RECOMBIVAX HB/ HEPATITIS B	1986	100-500
PEPCID/ULCER	1986	500-1,000
NOROXIN/URINARY INFECTIONS	1986	100-500
MEVACOR/CHOLESTEROL	1987	1,000+
PRINIVIL/BLOOD PRESSURE	1987	100-500
PRILOSEC/ULCER	1989	500-1,000
PEDVAX HIB/FLU VACCINE	1990	UNDER 100
PLENDIL/BLOOD PRESSURE	1991	UNDER 100
SINEMET-CR/PARKINSON'S DISEASE	1991	100-500
CHIBROXIN/CONJUNCTIVITIS	1991	UNDER 100
ZOCOR/CHOLESTEROL	1991	500-1,000
PROSCAR/ PROSTATE ENLARGEMENT	1992	100-500

...AND GROWTH IS WINDING DOWN



*PRO FORMA, REFLECTING PURCHASE OF MEDCO

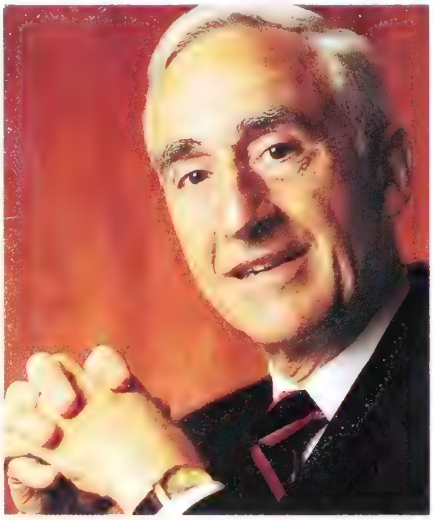


DATA: COMPANY REPORTS, SALOMON BROTHERS INC.

(TOP) PHOTOGRAPH BY FRED CHARLES; CHARTS BY ALBERTO MENA BW

tive. This year, Medco chief Martin J. Wygod looked to be the likely choice for CEO. But he quit the race in March, about the time Atwater and his colleagues were leaning toward Gilmartin. "Marty's a highly successful entrepreneur, and obviously Merck is a large company," says Atwater. "Merck is a different challenge."

WANT LIST. By that time, indeed, Merck's directors had taken charge. Led by Atwater, AlliedSignal Inc. CEO Lawrence A. Bossidy and former Princeton University President William G. Bowen, the strong-willed outsiders carefully limited Vagelos' role in the search. No surprise: In his new book, *Inside the Boardroom*, Bowen argues, "While retiring CEOs should provide advice and counsel, responsibility for choosing a new CEO rests squarely with the outside directors..."



Following that script, Atwater and other committee members met with the CEO in January to hammer out a list of the qualities they sought in a successor, then hired headhunter Neff. Ironically, Neff had raided Merck's senior ranks shortly before to recruit another Merck CEO contender, Executive Vice-President John L. Zabriskie, to run rival Upjohn Co. For the Merck post, Neff cast his net wide, contacting likely candidates from a dozen-name list only after they'd been checked out for obvious foibles.

Then the directors met secretly with candidates. They sometimes gathered in discreet second-floor meeting areas at New York hotels—a private dining room at the Carlyle was a favorite. In their offices, security was so tight that fax messages were never sent unless trusted secretaries or the directors themselves stood by the machines. In late March or so, Gilmartin met with Atwater and Bowen at Spencer Stuart's New York office. "It was obvious they liked him from the start," Neff recalls. "He was very articulate and did a terrific job of handling himself."

Soon the directors decided that Gilmartin's standing as an outsider—to Merck and to the drug industry—was a plus. They were struck by his record at Becton of team-building and leading by consensus, qualities he might need to calm the roiled waters at Merck. "Gilmartin knows the external forces that are driving the industry, but because he's not from a competitor, he'll be much better accepted at Merck," says recently retired director Dr. Richard S. Ross, who aided in the search. "This guy is a fresh thinker on the whole business."

Almost all the loose ends were tied up by May 12, when Gilmartin met with Vagelos. The men talked comfortably about their companies and the health-care world in a cordial three-hour dinner at Rudolfo's, a restaurant not far from Merck's headquarters in Whitehouse Station, N. J. "We certainly connected with one another quite easily," says Gilmartin. Vagelos declined to be interviewed.

P. ROY VAGELOS
Outgoing CEO, Merck & Co.

In January, a group of outside directors, led by Atwater, took control of the search to replace Vagelos. Says Atwater: "Change has got to be a part of what's going on."

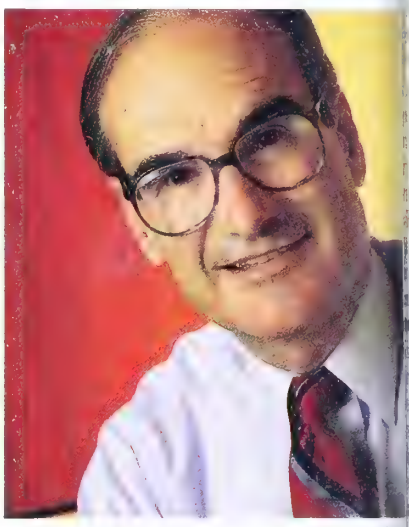
H. BREWSTER ATWATER JR.
CEO, General Mills; Merck Director

Gilmartin is known for his deft touch with people. Ralph S. Larsen, the CEO at Johnson & Johnson who worked with Gilmartin at Becton from 1981-83, says: "He is one of the brightest, most effective, and decent executives I know." Last year, he and his wife attended the wedding of a Becton driver, staying through the reception. Says Becton Vice-Chairman John W. Galiardo: "He never caught the CEO disease."

Gilmartin also proved himself as a strategic thinker and a cost-cutter. He opened international markets, sharply boosting overseas sales to 44% of revenues last year. He also drove Becton into higher-margin proprietary diagnostic products, such as instruments for detecting cancer and AIDS. Overall, Becton's sales have risen 44% since 1988, to $2.5 billion; in the face of stiff pric pressure, gross profit margins have only two percentage points, to 44.5%

But engineering change at Merck almost certainly be tougher. Its pr growth has slowed sharply since late 1980s, and under managed-c Merck may never again see the 3 plus annual gains that entranced inv tors. Analyst Mariola B. Haggar of S mon Brothers Inc. figures earnings t year may rise 11.5% to about $3 billi and then add another 12.7% in 1995. ter that, the picture becomes murki as two drugs accounting for $3 billion sales come under pressure with no parent successors.

One wild card: Whether newly p chased Medco will substantially bo market share for Merck's products.



martin will have a big hand in maki the acquisition pay off. Besides adapti the company to the new health-care e vironment, though, Gilmartin's manda includes a hard look at R&D. "I thi [he's] got to examine costs and exami the research program," says Ross. want him to become familiar with it a get on top of it."

DRUG WITHDRAWAL. After a stell record of drug introductions in t 1980s, Merck for at least five years h been struggling with a dearth of b new products. Merck labs churned o five drugs in the 1980s that each t $500 million in sales annually. So f only one of the six new drugs intr duced in the 1990s has reached th threshold. And the company's last maj new product, the prostate-shrinking dr Proscar, hasn't been as effective Merck had hoped: It will fall far short Vagelos' $1 billion sales goal. Moreove Merck recently had to drop a license schizophrenia medicine, Roxiam, fro U. S. testing after at least one Europe user died. And the company is thr

; or more away from debuting its next big remedy, the osteoporosis ment Fosamax.

ps between big new drug introduc- wouldn't be such a great worry if ren't for the radically shortened ycles medicines now face. For about hird of its drug sales, Merck is per- y relying on the cholesterol-reducer acor, introduced in 1987, and the ovascular medicine Vasotec, which ted the year before. But $2 billion tec could fade fast when a compet- product from Bristol-Myers Squibb off-patent in 1995 and cheap ge- s emerge. And Mevacor already low-priced competition. To bolster , in mid-June Merck cut prices on dosages of Mevacor and a similar , Zocor, by up to nearly one-third.

hile continuing to cut costs, Gil- in will face several major challeng- 'or one, he must foster an atmos- e in the labs that gives researchers freedom they need for discovery e also making sure that they pro- . "You must give people the oppor- y in the laboratory to use their judgment and instincts, and the ndipity will then come," says Cecil 'ickett, a former Merck star who the big company to become execu- vice-president of research at the ler Schering-Plough Corp.

UTIVE EXODUS. An equally difficult : expanding overseas. Offshore sales unted for about 45% of Merck's total s last year, making it one of the global drugmakers already. Now, if co can move its distribution clout ad, Merck could pick up still more me. Already, Medco is competing ely for European business.

ilmartin acknowledges that Merck faces the threat of a management n. With Markham, Zabriskie, and god already gone, Merck now faces risk that crucial top managers ed over in the long CEO search could wooed away. Among them: Execu- Vice-President Jerry T. Jackson, Judy C. Lewent, and research chief vard M. Scolnick.

ilmartin appears to be striking the t tone, however. He's glad he won't cially take over as chairman until "Learning as much as I can between and Nov. 1 is crucial, because I'm ing in from the outside," he says. there's a lot I have to know." That's come candor and humility from a ck executive. But it's also a jarring inder of the company's big gamble— the learning curve won't prove too ep for its new chief.

By Joseph Weber in Whitehouse Sta- , N.J., with John Byrne in New York, e McNamee in Washington, and Gary Williams in Boston

MERCK'S THINNING MANAGEMENT

Three executives in the CEO race have left...

MARTIN J. WYGOD

Sold Medco to Merck for $6.6 billion last year. Felt he had Vagelos' backing but quit the race—and then Merck—because it demanded a "total commitment" he couldn't provide. A long shot with the board anyway.

JOHN L. ZABRISKIE

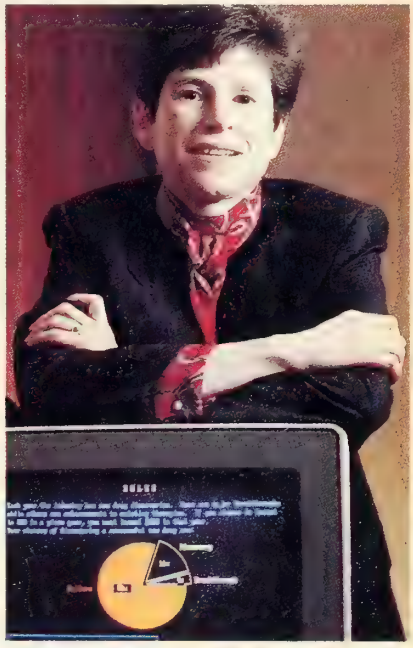
Merck's head of manufacturing left in December for the top job at rival Upjohn. A lifer at Merck, he seemed to have all the right credentials—but had been passed over when Markham was chosen president.

RICHARD J. MARKHAM

Elevated in late 1992 to president and heir apparent by Vagelos, he quit the job, citing personal reasons, after only seven months. The hard-charging sales executive, then 42, became president at Marion Merrell Dow.

...And other important players may follow

JUDY C. LEWENT ▶



Merck's chief financial officer was widely rumored to be presidential timber. She will be courted intensely by headhunters, and could jump for the right opportunity—maybe back to Wall Street.

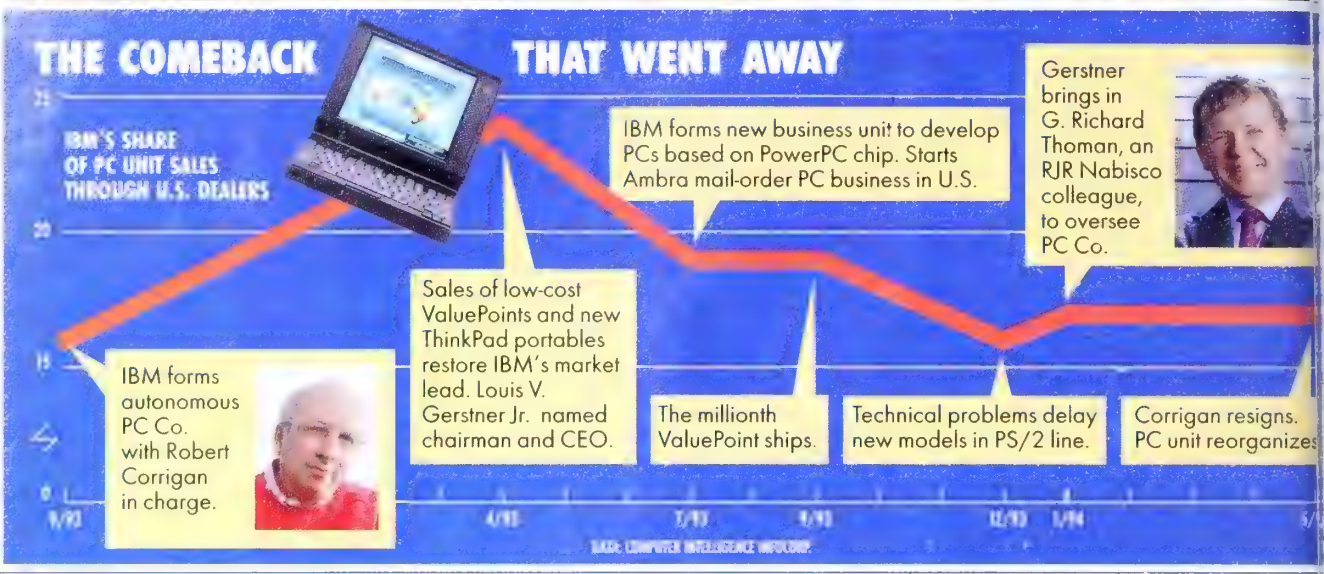
EDWARD M. SCOLNICK

The brilliant head of R&D was seen by many as Roy Vagelos' natural successor—until his gruff ways called his personnel skills into question. He may want to stay on until drugs developed during his watch debut.

JERRY T. JACKSON

Merck's worldwide sales head got a hefty golden handcuffs deal after Wygod took over much of the sales force. Jackson will likely be on headhunters' short lists, though he talks longingly of retiring to Texas.

PHOTOGRAPHS BY JEFFREY LOWE ONYX (WYGOD), JOHN S. ABBOTT (LEWENT)



IBM: THERE'S MANY A SLIP...

After a promising start, the year looks like a washout for the PC division

Momentum is a funny thing in the personal-computer business. Just ask IBM. Last year, it was full steam ahead: Big Blue's PC unit was cranking out new models, slashing prices, adding distributors, and on its way to taking the No. 1 spot in the U. S. market from Apple Computer Inc. But that was last year. Now, the IBM Personal Computer Co. has badly misjudged demand, leaving customers clamoring for some models, such as the popular ThinkPad laptop, and IBM stuck with large inventories—$100 million by some estimates—of other models.

Help is on the way—in the form of new models, an untangling of product lines, and an overhaul of internal operations. But none of these moves will do much good before the fourth quarter. That makes 1994 a possible washout in PCs for IBM, and it bodes ill for the company's overall recovery. Last year, PC sales surpassed the $6 billion that IBM's mainframe hardware brought in. And as more companies move to networks of powerful PCs, IBM must have the right products in its lineup—or risk losing out to rivals such as Compaq Computer Corp. and Hewlett-Packard Co.

Pesky Compaq's sales, meanwhile, are exploding. According to market researcher International Data Corp., the Houston company sold 970,000 PCs worldwide in the first quarter, vs. 840,000 for IBM. IDC thinks new products will hoist IBM back into the lead for this year—but Compaq has been coming on strong. "All last year, IBM couldn't deliver, so many of our dealers started to write Compaq into their contracts," says Gregory A. Pratt, chief operating officer of Intelligent Electronics Inc., a wholesaler that supplies PC dealers. One result: Big Blue's share of sales through computer dealers tumbled to 18% in the first quarter, from a peak of 24% in the second quarter of 1993, figures Computer Intelligence InfoCorp.

BAD REACTIONS. At the same time, technical problems delayed new PS/2 models until mid-June, leaving IBM without a new product to pitch to its core corporate customers since early 1993. Even IBM concedes that its new products are taking too long to hit the market, its costs are too high, and its customers are confused by overlapping product lines. "We haven't been doing as well as we wanted to," says IBM Senior Vice-President G. Richard Thoman, who n[illegible] says the second quarter will be "O. [illegible] but not great."

IBM is redesigning its PC lines to include "commodity" components that are in plentiful supply

IBM Chief Executive Officer Louis [illegible] Gerstner Jr. is counting on Thoman [illegible] turn things around. Gerstner brou[illegible] in his RJR Nabisco Inc. protégé last J[illegible] uary to oversee the PC unit as well [illegible] IBM's on-line service, Prodigy Servi[illegible] Co., and printer business. Thoman t[illegible] over the top PC job in May, wh[illegible] Robert J. Corrigan, the previous chi[illegible] abruptly resigned.

How did Big Blue get in such a pi[illegible] le? Insiders say the troubles stem fr[illegible] its inability to keep up with qui[illegible] changes in the market. The reason[illegible] lousy forecasting, manufacturing log[illegible] tics, and control systems. For examp[illegible] until nine months ago, the PC unit did[illegible] have the authority to centralize its pu[illegible] chasing to get Wal-Mart-like clo[illegible] Among other things, that prevent[illegible] management from shifting away fr[illegible] pricey Japanese components as the y[illegible] has risen. At a meeting with analysts [illegible] April, IBM Chief Financial Officer Jeror[illegible] B. York cited heavy buying of Japane[illegible] parts as one reason the PC Co.'s profi[illegible] are too low.

Thoman took charge of the operati[illegible] himself because he wants to be su[illegible] costs drop—and products get out th[illegible] door faster. "We are not the low-co[illegible] provider in the industry, and we're n[illegible] fast enough to market," he says. Boos[illegible] ing profits is another goal. The PC unit[illegible] revenues were up about 29%, to ju[illegible] over $8 billion, last year, but it had n[illegible] profits of only about $200 million, est[illegible] mates PaineWebber Inc. analyst Micha[illegible] K. Kwatinetz. By contrast, Compaq[illegible] profits last year hit $462 million on sal[illegible] of $7.2 billion. Gerstner "just can't se[illegible]

BM can't do as good a job as Com- says Merrill Lynch & Co. analyst l Mandresh.

least one reason, however, seems IBM still doesn't use common parts s its product families. For instance, of the components in Big Blue's end PS/2 family are unique to that uct line. That means parts must be ed from suppliers as much as five hs in advance, making it tough to quickly to market changes.

ose slow-footed ways have cost IBM y with customers. Consider Harris odist Hospital in Fort Worth. Larry evins, the hospital's chief informa- officer, says he got fed up after ng two months for IBM to deliver end PS/2 servers to run his net- . So Blevins turned elsewhere. in 10 days, he had two Compaq ers powering 400 PCs. He says he d time and money: The Compaq ers and software cost half the 000 IBM was proposing and could le five times the data traffic.

DDLED. To speed its reaction time, nan says, IBM is redesigning its PC to include "commodity" components are in plentiful supply. That will management more flexibility to machines as orders come in, rather according to forecasts. IBM is al- y doing that in Europe, and Thoman 80% of the U.S. operation's ma- es will be built that way by yearend. nother key Thoman objective: to tle down overlapping product lines. ink we have succeeded in confusing marketplace," he admits. It's easy to befuddled. The PS/1 is a consumer- nted line, but the PS/2 is a more erful line aimed at corporate cus- ers. Meanwhile, the ValuePoint line— s answer to low-cost PC clones—has -end models that clash with the 2. Then there is the mail-order Am- line—and other new PCs coming out he fall based on IBM's fast PowerPC —which will compete against models BM's lineup that run on Intel chips. homan's simplification campaign will off with yet another PC line due this fall. Those PCs will meld fea- es of IBM's PS/2 line with cheaper, lily available parts. Already one big omer likes what it sees: Giant in- er CIGNA Corp.—one of the largest orate PC buyers in the nation—will t from AST Research to IBM. Using , CIGNA figures its annual PC tab will p 20%, to $12.6 million.

Such deals are encouraging. But a lot iding on the fourth quarter—when does 40% of its PC business. Thoman ws IBM has to keep building momen- if it wants to be ready.

By Ira Sager in New York, with Peter rrows in Dallas

AUCTIONING OFF AN EMPIRE

Can Ziff Communications fetch top dollar—or will the sale reflect its stall?

Mudslinging is a common practice in computer publishing, where three powerful and zealously private companies vie for a $1.8 billion market. Even so, Eric Hippeau had heard enough. The chairman of Ziff Communications Co. was patiently responding to claims from rival publishers that Ziff had peaked in its growth, was out of step with the computer industry, and so forth. "Maybe we should start saying nasty things about our competitors," he said tartly.

Hippeau can ill afford such criticism just now. On June 10, the Ziff family announced that it was putting its giant publishing company on the block. Lazard Frères & Co., which is running the auction for the family, thinks Ziff can fetch roughly $2 billion. Dirk E. Ziff and Robert D. Ziff, sons of the company's retired billionaire owner, William B. Ziff Jr., plan to plow the proceeds into a new investment company.

ROBERT (ABOVE) AND DIRK ZIFF: DOWNPLAYING THE LOSS OF AD MARKET SHARE

The younger Ziffs may wind up with less pocket money, though, if they can't shake widespread industry gossip that they're bailing out of a business whose best days are behind it. "Ziff has been unable to move out of its position in the PC market," says Michael S. Leeds, president of rival CMP Publications Inc. "They do not have a good track record in starting magazines."

TAINTED CAVILS. That's not likely to deter suitors such as K-III Communications Corp., which could ride Ziff's existing magazines to instant dominance in the computer field. Publishing executives note that other rumored buyers, such as Reed Elsevier PLC and BUSINESS WEEK's parent, McGraw-Hill Inc., could use *PC Magazine* and other Ziff titles to bolster their presence in the market. And one can attribute some of the cavils of Ziff's rivals, CMP and International Data Group Inc., to the fact that the family excluded them from the auction.

Nevertheless, there's no denying that Ziff's torrid growth has slowed. Advertising pages are down at key titles such as *PC Magazine*, *MacWeek*, and *Windows Sources* for the first five months of 1994. The company managed to eke out growth in advertising revenue because rising circulation allowed it to boost ad rates. But overall, Ziff's share of U.S. computer ad revenue dropped from 53% to 50%, according to market researcher Adscope. In contrast, IDG's share rose from 24% to 26%, while CMP was up from 15% to 16%.

Ziff's problem, outside experts say, is that it became overly dependent on the explosive growth of personal computers. During the 1980s, the trio of *PC Magazine*, *PC Week*, and *PC Computing* were virtual bibles for consumers choosing among Compaq, Dell, and a host of cut-rate PCs. Now, though, most of the low-cost manufacturers have disappeared, and the PC market no longer generates as much advertising.

Ziff has also adapted fitfully to the industry's new focus on networks instead of stand-alone PCs. It launched *Corporate Computing* in 1992 for this market but shut it down after some $17 million in losses.

The Ziff brothers say they aggressively cover networking in special editions of *PC Magazine* and *PCWeek* and through their trade-show division. Robert Ziff also downplays the company's loss in advertising market share: "I hardly think this is the harbinger of a long-term trend." Indeed, Ziff expects record revenues of $1 billion in 1994. Executives close to the company say it could generate $150 million in cash flow. As for new ventures, the Ziffs point to their on-line service, Interchange, which starts this fall.

Right now, media executives give the edge in the bidding to Reed, the Anglo-Dutch publishing giant. With a trade-show company that complements Ziff's, Reed has every reason to make a move. Whether it would pay top dollar for a company whose ad growth has stalled is another question.

By Mark Landler in New York

POLITICS

A HOLY WAR FOR THE SOUL OF THE GOP

Moderate Republicans wake up to an onslaught from the religious right

The front-runner for the Republican Party gubernatorial endorsement in Minnesota—a soybean farmer and devout Christian named Allen Quist—has been likened to cult leader David Koresh. The barb, however, isn't a partisan attack hurled by Democrats. The invective comes from mainstream GOP operatives loyal to incumbent Governor Arne H. Carlson, a pro-choice moderate. And they're not stopping at name-calling. With the state GOP dominated by religious zealots dubbed "Quistians," Carlson is likely to be denied his party's endorsement at a June 17 state convention. So he plans to bring his case—and a 17-point lead in the polls—directly to party members in the Sept. 13 GOP primary.

Call it the revenge of the country-clubbers. Stunned by the takeover of at least 16 state party organizations by religious and social conservatives, Establishment Republicans are trading in golf clubs for battle armor as they try to blunt the growing strength of an aggressive right wing. "It's very frightening," frets pro-choicer Mary Dent Crisp, a former Republican National Committee co-chair. "They're sophisticated, they work hard, and they have intensity. We ignore them at our own peril."

The internal warfare could take a tremendous toll on the resurgent GOP. Moderates worry that the party will lose an opportunity in this year's midterm elections to exploit President Clinton's low approval ratings and public outrage at the Democrat-dominated Congress. But their worst fear is that radical rightists will take over the party in a bloodbath in 1996 and lead Republicans to an electoral debacle. "If we nominate a McGovern clone from the right, we could blow the party out of the water for years," says Dolly Madison McKenna, trounced in her bid for the Texas GOP chair.

The hard-liners scoff at such pessimism. Pointing to recent House special election victories in Oklahoma and Kentucky, they argue that they are vital to Republican successes. And the right wants to make sure that GOP pragmatists don't compromise on abortion, family values, and other core issues. "The war is on now," warns conservative strategist Greg Mueller. "And when it is over, the hard-core Establishment Republicans are going to be extinct."

The strength of social conservatives within the Republican Party has been growing for two decades. And representatives of the party's right wing, such as religious broadcaster Pat Robertson a conservative commentator Patrick J. B chanan, were prominent at the 1992 R publican convention. Although the G Establishment blames the conventio rightist call for "cultural war" for sinki George Bush's reelection campaign, c servatives emerged stronger and m energized than ever.

"FULL MOONERS." On June 11, religi conservatives engineered a hostile ta over of the Texas Republican appa tus. And with the backing of the Rev end Jerry L. Falwell and Robertso Christian Coalition, former National S curity Council aide Oliver L. North w the Virginia GOP Senate nomination June 4. Senate Minority Leader B Dole (R-Kan.), who derisively refers the hard-liners as "full mooners" for th constant baying, has learned that t conservatives can bare their teeth well. When he distanced himself fr North on June 5, outraged right-winge prompted Dole to reverse himself a donate $5,000 to North's campaign.

The moderates won't surrender po er without a fight, though. In Pennsylv nia, Republican National Committ member Elsie Hillman of Pittsbur spent $300,000 of her own money to cr ate a centrist Republican Future Fun In the May 10 primary, Hillman-back candidates triumphed over 10 Christi Coalition candidates in Allegheny Cou ty, though her candidates had mix success in rural areas. But even t fund's executive director, John Denn says his troops will never match t zeal of the Christian soldiers array against them. "The problem with mod ates is just that: We're moderate," sa

NORTH: CRUCIAL SUPPORT FROM FALWELL AND ROBERTSON

A HOUSE (AND SENATE) DIVIDED

Branches of the GOP's family tree:

Branch/Leading lights
COUNTRY-CLUBBERS
George Bush
Virginia Senator John Warner
SOCIAL CONSERVATIVES
Ex-Education Secretary Bill Bennett
Former Veep Dan Quayle
ESTABLISHMENT CONSERVATIVES
Senate Minority Leader Bob Dole
House Minority Leader Bob Michel
RELIGIOUS RIGHT
Broadcaster Pat Robertson
Senate candidate Oliver North
ARCHCONSERVATIVES
Commentator Pat Buchanan
North Carolina Senator Jesse Helms

DATA: BUSINESS WEEK

ıy. "We have this live-and-let-live ude. We've got to get passionate."
ı Capitol Hill, Representative Steve lerson (R-Wis.) decided to stand up ıe right and formed a group of 30 centrists. Retribution was swift. A ervative Christian filed against him e Sept. 13 GOP primary and accused of coddling pornographers by voting ıst a 40% cut for the National En- nent for the Arts. Protests Gun- on: "In the name of Christ, the pol- of hate these people practice is scary."

Next door, in Minnesota, the Carlson forces think they were helped when Quist declared that men were genetically predisposed to run families. While such statements may help Carlson in the primary, the holy war may have hurt the party's prospects in November—and beyond. The 1994 skirmishes are only a prelude to the 1996 Presidential showdown. Already, would-be candidates are toeing the line on issues dear to the right, including gay rights, family values, vouchers for religious schools, and prayer in public schools.

The Republicans' internal *jihad* comes as a joy to Clintonites. "Ultimately, you'll see the crack-up of the Republican coalition," gloats Clinton adviser Paul E. Begala. "They are driving out sensible centrists and conservatives. It's going to be impossible for them to hold both the suburban, dual-income couples and these radical, fanatical right-wingers." White House strategists pray for that scenario. But GOP true believers are convinced it's their prayers God will answer.

By Richard S. Dunham in Washington, with Stephen Baker in Pittsburgh

LE

ELFARE REFORM FROM MOM WHO'S BEEN THERE

lsey's plan would be far costlier than Clinton's

When President Clinton hit the hustings in Kansas City on June 14 to announce his new are plan, one congressional Demo- California's Lynn C. Woolsey, was hing with a gimlet eye. Clinton pro- d the most comprehensive reform e the 1960s, including new work re- ements and a tough new two-years- you're-out provision to get more re- nts off the rolls faster. Woolsey's ial interest: She's Congress' only ıer welfare mom.

representative once on the dole? lsey's troubles started back in 1967, n she was 29 and living the dream he baby-boom generation: three ıg children, successful husband, and ce house in the Northern California rbs. "A virtually *Leave It to Beaver* she recalls wistfully.

BROKEN. But the dream life ended, says, when her marriage fell apart. life spiraled out of control. Divorce. ow-paying job that couldn't cover d-care costs. And finally, welfare. e truth of the matter is, even today I the face of what is a typical welfare her—white, two children, and on wel- because the father deserted or di- ed," she says. She still remembers system's dehumanizing bureaucracy roadblocks to self-sufficiency.

quarter-century later, to be sure, lsey supports radical welfare reform. lieve me, the system is broken," she s. "It doesn't work for welfare recip- s, and it doesn't work for taxpay- " But she calls the President's two- r-cap proposal "just too inflexible. It me three years [to escape welfare], I wasn't ever in the slow class." l despite being a rookie in Congress, has become a key player in the de- bate. "Her day-to-day knowledge can't be duplicated by hearings," notes House Speaker Thomas S. Foley (D-Wash.).

Woolsey is pushing for a far more costly package than Clinton's. She has teamed up with Representative Ralph Regula (R-Ohio) to craft a proposal that would abolish rules that penalize work, strengthen child-support collection from absent husbands, and expand training, child care, and education programs. Its estimated $20 billion price tag would be offset largely by reductions in welfare rolls as women collect more child support, as well as by defense cuts.

Critics scoff that the funding will never materialize, transforming a big-hearted plan into a big-time budget-buster. They say a government-based solution won't deal adequately with problems such as illegitimacy and the culture of dependency spawned by the current system. Representative E. Clay Shaw (R-Fla.) calls Woolsey's personal triumph "heroic" but says she ignores abuses by teenagers who have babies simply to receive more benefits.

Woolsey retorts that many politicians are more interested in demonizing welfare recipients than in helping kids. "This whole debate is full of myths," she gripes. "We end up punishing innocent children because they are poor. What are they going to do? Go to work?"

Work is exactly what got Woolsey off welfare. In 1969, she landed a $580-a-month entry-level job at a small startup company and rose through the ranks, leaving welfare after three years and eventually becoming the company's human resources manager. She quit after 11 years to form her own company, Woolsey Personnel Service. After a seven-year stint on the Petaluma city council, Woolsey in 1992 won a House seat representing parts of Marin and Sonoma Counties near San Francisco.

Despite her efforts, Woolsey is not sure her colleagues "have the courage" to embrace her expensive approach. She knows she won't get everything she wants. But for welfare recipients frustrated by the bureaucracy and perverse rules of the current system, just having her at the table is a big step forward.

By Richard S. Dunham in Washington

CONGRESSWOMAN LYNN WOOLSEY

AGE 56

HOME Petaluma, Calif.

TURNING POINT #1 Applies for welfare in 1968. Calls first year on the dole "the hell year of my life" after 13 baby-sitters and frustrating encounters with bureaucrats.

TURNING POINT #2 Lands an entry-level job with Harris Digital Telephone division in 1969, rising to become human resources manager. Founds her own business in 1980.

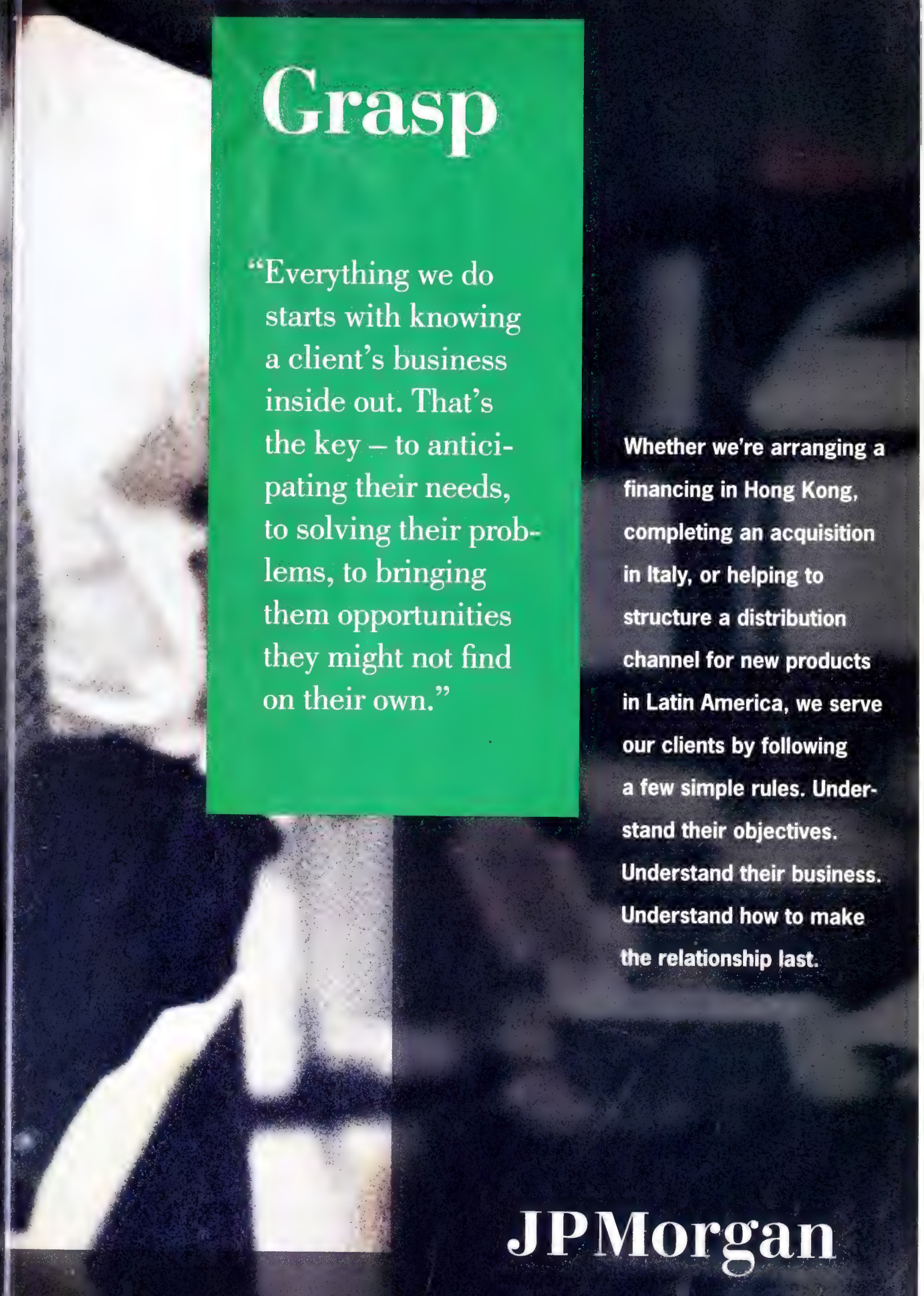
EDUCATION Completes bachelor's degree at age 42 at the University of San Francisco.

PET ISSUES Welfare reform, child-support enforcement, missing children.

DATA BUSINESS WEEK

CATHERINE LAMBERT

Corporate finance and equity research professionals, New York



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EXECUTIVE SUITE

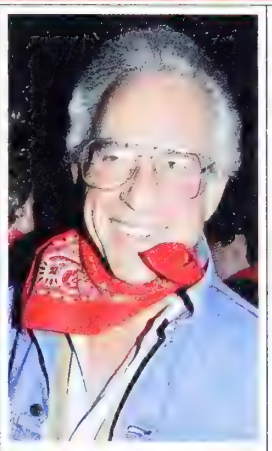
REMAINDERED AT S&S

Simon & Schuster's parent shows Chairman Snyder the door

Firings aren't gracious affairs. And Viacom Inc.'s peremptory dismissal of Richard E. Snyder on June 14 was no exception. A senior Viacom executive says Simon & Schuster Inc.'s headstrong chairman simply didn't fit into the team being assembled by Viacom Chairman Sumner M. Redstone since he acquired the publisher's parent, Paramount Communications Inc.

But when author and Snyder loyalist Bob Woodward called Redstone to complain about the sacking, he says Redstone distanced himself from it—saying it was the "agenda" of Viacom President Frank J. Biondi Jr. Redstone didn't return a call seeking comment.

One can understand Viacom's awkwardness. How do you mollify a writer such as Woodward, who has developed ties to Snyder that span two decades? Indeed, as rival publishers sift through the fallout from Snyder's stunning ouster, several say Simon & Schuster's trade publishing division—with its stable of celebrity authors—may suffer the most harm.



WITH SNYDER GONE, WILL AUTHORS GO TOO?

WHO? Snyder's replacement, Simon & Schuster Chief Operating Officer Jonathan Newcomb, made his name as a competent administrator rather than a visionary publisher. Among his accomplishments: the surprisingly smooth integration of Macmillan Inc. into Simon & Schuster. Paramount acquired Macmillan for $553 million last November. F two well-known Simon Schuster authors say th have had no contact wi Newcomb, and even a t editor there says she h dealt with him only rare

Newcomb promises higher profile: "I'll ha more personal relationshi with creative people in t industry." But otherwise, plans to continue Snyde strategy of overseas expa sion and technological in vation. Given how Simon Schuster has changed the past decade, Viac may not view Newcom background as much of a handicap. Or 23% of the company's $2 billion in rev nue comes from consumer publishir Bob Woodward may be crying foul. B his is a shrinking voice in Viacon growing empire.

By Mark Landler in New Yo

MERGERS

REALITY PLAYS MATCHMAKER

Now, MetLife/Travelers must rush to beef up a managed-care business

For a year, merger frenzy has gripped the health-care world. Giant drugmakers Merck & Co. and Roche Holding Ltd. have bought distributors and smaller rivals. Health-care providers Columbia Healthcare Corp. and HCA have agreed to combine operations. Amid the tumult, though, the insurance industry has been strangely quiet.

Until now. On June 14, Travelers Cos. and Metropolitan Life Insurance Co. announced they would combine their health operations in a transaction, valued at $1 billion, that will create the nation's largest health insurer (chart). MetLife also will buy Travelers' group life, disability, and dental-coverage businesses. "We decided to put Snoopy with the red umbrella," says Sanford I. Weill, Travelers' chairman.

On one level, the merger is simply a way for two industry also-rans to beef up. More important, though, is the huge shift it portends for the business. Travelers and MetLife, like many insurers, are rooted in traditional indemnity plans—under which they just pay medical bills as received. The new company will be almost single-minded in trying to move patients out of traditional policies and into HMOs and other such organizations. "There's no question that this deal is centered around managed care," says Gary D. Lake, a principal at consultant A. Foster Higgins & Co.

Rivals are racing to build managed-care businesses, too. CIGNA Corp. plans to increase membership in its health maintenance organizations by at least 10% annually for the next several years. Aetna Life & Casualty Co., in the midst of a strong drive to build a captive network of doctors' offices, estimates that the trend away from indemnity business will draw 80% of the $250 billion

market into managed care by 19

Travelers and MetLife think th have found the right leader for that ne reality. They are bringing in Kenne L. Simmons, former chief executive United Healthcare Corp., a Minneton (Minn.)-based HMO, to oversee the com nation. Simmons, who also built Prude tial Insurance Co.'s HMO business, is w regarded in the industry.

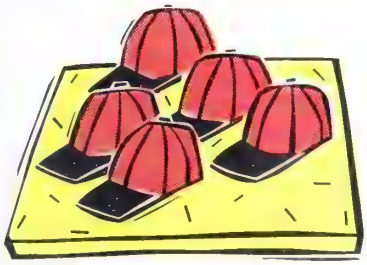
BETTER DEALS. The new chief must quic ly build up a managed-care operation most from scratch. "It's clear that t top three are way ahead of Met a Travelers in terms of the managed-ca base," says Lawrence G. Mayewski, se ior vice-president of A. M. Best Co., insurance rating agency. MetLife a Travelers have solid corporate-gro health businesses, but both have lagg behind rivals in managed care. Co bined, they have 391,000 consumers e rolled in HMOs. CIGNA has 3.1 million H customers, Prudential 1.5 million, a Aetna 1.2 million. One disadvantage the MetLife/Travelers merger in offse ting this lag: Many of the two comp nies' managed-care networks overlap.

Still, the combined operations w likely negotiate better deals with docto and hospitals. And back-offi staff probably will be co bined, cutting overhead. I deed, say analysts, such ef ciencies likely will drive mo big deals in the sleepy i surance industry. Travelers a MetLife simply figured that fa out first.

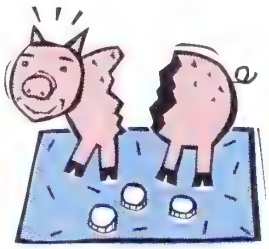
By Chris Roush in Hartfo

Smart Solutions℠

NUMBER 22–EXPRESS MAIL

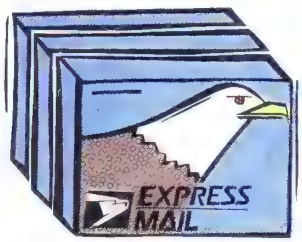


Person has to deliver 50 hats by tomorrow.



Doesn't have much money.

Goes to Post Office.



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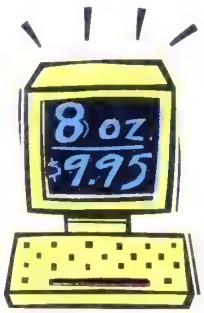

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SPORTS BUSINESS

BASEBALL'S STRIKE TALK TURNS SERIOUS

The owners' plan could mean empty stadiums and frantic fans

Take a cold drink in hand, lean back, and think baseball. The thwack of ball hitting bat. The roar of the fans in the bleachers. The screams of multimillionaire baseball owners crying poverty to millionaire players who threaten to lay down their gloves if their salaries are touched.

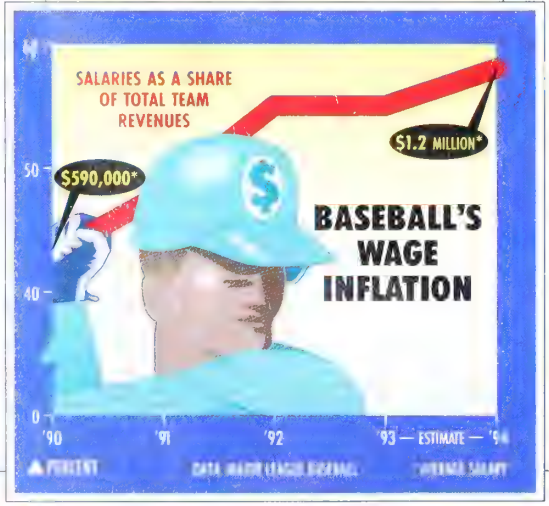
Yup, it's that time. Labor negotiations have begun in Major League Baseball, and the outlook calls for déja vu all over again. As usual, the clubs are unhappy about player salaries, which have doubled in five years. The owners' solution, presented to the players' union on June 14: a cap on salaries and benefits at 50% of revenues.

OMINOUS GROWLS. It ain't flying. The players, well content with their $1.2 million a year average paychecks, are growling ominously about a strike come August. That would put the two sides at zero for eight—a strike or lockout every time they've bargained since 1972. This time, "once they force us to go out, it will probably be a long time before we're back," warns Donald M. Fehr, chief negotiator for the Major League Baseball Players Assn.

It's easy to see why the owners want to play hardball. Player salaries have soared to 58% of revenues this year, from 43% in 1990 (chart). Meanwhile, the league's national TV revenue has skidded from $365 million a year under the four-year contract that expired in 1993 to perhaps $165 million this year, according to initial league estimates. Although two new stadiums and fat product licensing fees have offset some of the loss, the clubs' total revenues still slipped by $50 million this year, to $1.78 billion. Result: a $150 million loss this year, says Richard Ravitch, baseball's chief labor negotiator.

More important is the distribution of revenues among the league's rich and poor. National TV money is divvied up among all the owners. But clubs in large markets, such as New York and Atlanta, win big local TV and other revenue that they don't share. So they can outspend rivals and still turn a profit. The Atlanta Braves coughed up $52 million for salaries this year; impoverished San Diego will spend about $15 million.

The owners hope the salary cap will solve these problems. All clubs would spend the same amount: 50% of annual league revenues divided by 28 teams. This would limit rich teams' advantage in buying talent, although clubs would have the leeway to spend 84% to 110% of the average. The union and owners would negotiate minimum salaries



PLAYERS EARN AN AVERAGE OF $1.2 MILLION A YEAR

through players' four year. After that, they co sell their skills to the hig est bidder. However, clu could match any offer player got for two years

Players would be guaranteed to g half of all revenues and no less th the $1 billion they'll get this year—u less league revenues drop. "Playe wouldn't take a pay cut," says Ravitc "All we're saying is that future grow will be divided equally between playe and owners."

The players' response: Let the fr market solve any pay problems. If t owners' losses are really so onerou market pressures would force salari down. Indeed, because revenues ha grown, owners have $135 million mo left over after salaries today than th did when players took 41% of revenu in 1989. The union also distrusts t league's revenue and loss figures. A ter all, says Fehr, clubs fetch more e ery time they're sold. Last year, t Orioles went for a record $173 millior

LOSING PITCHER. In reality, argues Feh any losses that may exist are borne p marily by the smaller-market teams. H solution? Let big-city clubs share loc revenue with smaller ones and balan out payrolls, as football teams do. Ow ers did agree to limited revenue-sharin in January, but not enough to solve th payroll disparity. "The small-market gu need money, and the larger ones wor pay," says Fehr. "So they want us solve their problem."

Both sides have debated this issu for so long that their arguments see scripted. And so does the conclusion: strike this August if no agreement reached. In a strike, "I'll lose anythir from $750,000 to $1 million," dependir on when it begins, says Atlanta pitch Tom Glavine. "That's not easy to wa away from." But he'd do it: August when pennant races swing into hig gear, giving the union more bargai ing leverage.

Given the likelihood of a walkou the real question is the strength the owners' resolve. In prior fac offs, big-city owners were unwillir to help their small-city brethren ar caved in. This time, "there's no con missioner to foul things up," say one hard-line owner. Instead, Bu Selig, the Milwaukee Brewers' own er who's serving as acting commi sioner, has tried to forge a unite front. If he succeeds, fans may fac a long, dry summer. No thwack. N roar. Only groans.

By Aaron Bernstein in New Yor with David Greising in Atlanta

If Michael Carmody had a ThinkPad 360C, he could stay within his budget and still have the processor he needs, the hard drive he needs, and the color screen he doesn't need but really really wants.

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AUTOS

FORGET WOODSTOCK—THESE FOLKS ARE HEADIN' TO SPRING HILL

Thousands of fanatic Saturn owners are revving up for a Tennessee party

Question: If 30,000 Saturns are parked in the same lot, how do you find the one that's yours? Answer: Be sure to apply your special I.D. decal to the car before you leave it.

That's the sort of happy dilemma faced by the planners of the Saturn Homecoming in Spring Hill, Tenn., on June 24-25—a huge confab for owners of cars made by the General Motors Corp. unit. Hard as it is to believe, Saturn owners from as far away as Taiwan, Hawaii, and Alaska are flocking to the tiny town (estimated population, 3,500) where their cars were made. They will be entertained by country music star Wynonna Judd, will browse through craft fairs—and, of course, tour the Saturn assembly plant.

Many attendees have planned their vacations around this automotive Woodstock. Bob Steele, a retired oil-field worker, and his wife, Jeannine, are part of a California caravan making the 10-day, 2,200-mile trek, with stops at Saturn dealerships along the way. "We're being treated like royalty," says Steele. "You can't beat it."

"AFFECTION." All this to celebrate a car? Quirky, sure, for an econobox to inspire the loyal following of a fancy sports car. But Saturn's popularity is partly the result of a carefully calculated marketing campaign. Saturn won't say how much it's spending on the Spring Hill event, which fits the folksy image the GM division has nurtured since its 1990 debut. The cult of Saturn "is corporately manipulated," says Stuart W. Leslie, a history professor at Johns Hopkins University and a happy Saturn owner. "But it only works because people feel a genuine affection for the company." Why else have many owners volunteered to work as greeters at local dealerships?

Saturn and its dealers have been remarkably successful in cultivating a bond with buyers. "With Saturn, you feel part of something different," says Joe Hardison, an Apopka (Fla.) owner who's trekking to Spring Hill. Sales staff give new owners a big send-off cheer on the showroom floor when they take delivery of their new car. Then they welcome them back for weekend barbecues and car clinics. Customer coddling has helped Saturn's sales rebound this spring, after several sluggish months. May sales jumped 14% from the year earlier, to nearly 26,000, and Saturn's inventory of unsold cars dropped 46%, to a 54-days' supply.

Saturn Homecoming is just anoth form of customer appreciation, sa Donald W. Hudler, the company's vi president for sales, service, and ma keting. The event was a response hundreds of requests to view Satur assembly line. Still, Hudler add "We're kind of astonished that so ma people are making the time comm ment to come."

Saturn is taking full advantage the event. Its advertising agency, H Riney & Partners, created televisi ads that wryly poke fun at the noti of Saturn devotees passing up natior treasures such as Yellowstone Natior Park's Old Faithful "to meet the gu who put the window stripping on the cars."

TATTOOS, TOO. More than 2,000 of Sa urn's 8,700 workers have volunteer to greet visitors, drive shuttle buse and staff food booths. Six stages w provide live music, including a perfo mance by Judd that also featur Olympic gold-medal skater Dan Jans and gospel singers CeCe and Bel Winans. The company is charging a mission of $34 for adults and $17 f children, but visitors also can use the ticket for free admission to the nearb Opryland USA then park.

Saturn picked some tips by sending team of organizers study Harley-Davidson reunion last year, whe nearly 100,000 leathe clad bikers descended Milwaukee. Maybe that where the idea for th tattoo parlor came fro (Of course, the ink the Saturn logo tatt will be removable.) Car make it to Spring Hil No sweat. Local Satur dealers are staging the own wingdings tha could draw 100,000 mo folks.

Still, why would s many people opt spend their vacation Spring Hill? Says Lon Island (N.Y.) Satur dealer Michael Lazaru "America is a funn place." And for on weekend in late June, small town in rural Ten nessee will be just a li tle kookier than most.

By Kathleen Kerwi with Deidre A. Depke Detroit

SATURN'S HOMECOMING: THE VITAL STATS

EXPECTED ATTENDEES 20,000 to 30,000

LONGEST TRIP from Taiwa

EMPLOYEE VOLUNTEERS 2,000

MIMES, CLOWNS, AND JUGGLERS 12

SIGNS 1,169

TENTS 200

CINNAMON BUNS 6,000

TRASH CANS 92

TATTOO PARLORS One (washable tattoos only)

BIGGEST CHALLENGE Finding your Saturn in the parking lot at day's end

DATA COMPANY REPORTS, BUSINESS WEEK

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EDITED BY KEITH H. HAMMONDS

A VERDICT THAT COULD SULLY EXXON'S CREDIT

A nine-person jury in Anchorage, Alaska, may have breached Exxon's relatively impenetrable defenses. On June 13, it decided that the oil company should be punished for recklessness in the Valdez oil spill. Now, lawyers for the 14,000 fishermen, Alaskan natives, and others say they'll seek $15 billion in damages. Few analysts think the final award will go nearly that high. But even a smaller settlement could force Exxon to borrow what it has not already set aside for a settlement, putting its gold-plated credit rating at risk. And while the company already sells $1 billion in assets a year, "this could accelerate some decisions," says Merrill Lynch analyst Gus Fliakos.

IS IT MAYDAY FOR USAIR?

Can USAir pull out of its dive? With partner British Airways threatening to write down its investment, the long-troubled airline disclosed on June 14 that it had asked its unions for $500 million a year in permanent concessions. It hopes to generate another $500 million in annual savings through a wholesale restructuring that would include staff cuts, subcontracting some ground services, and offering more shuttle-like flights. That USAir employees will agree isn't certain; union leaders have questioned whether deep labor concessions are needed. Some industry experts also suspect that the proposed restructuring comes too late for the airline, which has been losing altitude after $2.4 billion in accumulated losses since 1988.

GM: A COURT WIN AND A HOT BATTERY

Does anyone remember the Shannon Mosely decision? A year ago, a U.S. court awarded $105 million to the family of a Georgia teenager killed in a General Motors pickup truck in 1989. In a stunning reversal June 13, though, Georgia's Court of Appeals threw out the original verdict. The three-judge panel explained that it overturned the case partly because the plaintiffs' lawyers had improperly told the jury about 120 lawsuits involving GM trucks and about a pending federal investigation into whether the trucks should be recalled.

Separately, GM announced that it has formed a venture to manufacture a revolutionary new battery. Its partner, Ovonic Battery, is developing a nickel-metal-hydride battery that could double the range of electric vehicles, to as much as 200 miles per charge.

GE PLUGS A GAP AT KIDDER

Kidder Peabody has cost parent General Electric $200 million this spring. Responding to a story in *The Wall Street Journal*, Kidder confirmed the capital infusion from its GE Capital subsidiary. The purpose: "to replenish the impact of the Joseph Jett trading scheme," says Dennis D. Dammerman, GE's CFO. Kidder, he says, remains a strong franchise. But skeptics abound. Says Michael Flannagan, analyst at Lipper Analytical Securities: "Kidder's franchise is dissipating."

A U.S. CHIPMAKER'S VIDEO-GAME VICTORY

Up to now, your kid's mind-numbing video-game players have come from a largely Japanese cast. But U. S. manufacturer is gettin in on the fun: Sony announce June 15 that LSI Logic of M pitas, Calif., will supply th central chip for Sony's fort coming PlayStation. Sony sa it picked LSI Logic because the company's ability to co solidate many functions on one densely packed chip: L Logic claims that its chip ha dles 200 million instructio per second, better than Inte Pentium. Just imagine th electronic mortal combat th will ensue.

HEADLINER

FOR TARTIKOFF, IT'S A WHOLE NEW WORLD

If Brandon Tartikoff was hoping to ease the stress of a bicoastal existence, his new job certainly won't help. The programming whiz, who lives in New Orleans but produces shows in Los Angeles, said June 14 that he would become head of the production arm of New York-based New World Communications.

Financier Ron Perelman, who owns New World, approached Tartikoff the day New World announced a deal with Rupert Murdoch to switch its 12 TV stations to Murdoch's Fox Broadcasting. Tartikoff, who turned NBC into the No. 1 network in the 1980s, now hopes to vault New World into the fro rank of TV programmers. Ne World is developing sever projects for Fox. And Tar koff will continue to nurtu projects, such as a Tom Cla cy miniseries, *OP Ce ter*, that he beg as an independe producer.

Tartikoff, 4 says he will r main in Ne Orleans, whe his daughter C la, though no much improved, still undergoing reh bilitation for injuries that sl suffered in a 1991 car ac dent. But Tartikoff jokes th he'll now rack up even mo frequent-flier miles shuttli from the Gulf Coast to t other two.

By Mark Landl

CLOSING BELL

FUNERAL MARCH

Money is flying in the once-sober funeral business. On June 9, Service Corp. International announced the industry's first-ever hostile takeover bid, a $130 million offer for Britain's Great Southern Group that would give it a firm European base. So far, J.D. Field & Sons, the private family outfit that owns 56% of Great Southern's stock, is resisting. But SCI has tended to get its way: It became the industry giant, with $899 million in sales last year, by buying hundreds of funeral homes and cemeteries in the last decade. It has also locked up future market share by arranging preplanned funerals for the still living.

DATA: BRIDGE INFORMATION SYSTEMS INC

ET CETERA . . .

▶Caterpillar allowed striki workers in Aurora, Ill., to r turn to the job.

▶The Justice Dept. clear the global alliance betwe MCI and British Telecom.

▶Sprint will sell a 20% inte est for $4.2 billion to Fren and German phone companie

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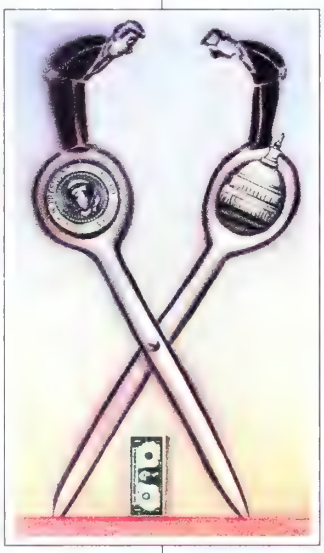
EDITED BY OWEN ULLMANN

993 WAS THE YEAR OF LIVING FRUGALLY. 994 IS FOR GETTING REELECTED

n Capitol Hill, 1993 was "The Year of Living Frugally." There were tax hikes, one-upsmanship on budget cuts, and windy rhetoric about the demon deficit. But looks a lot different. Instead of blockbuster deficit-reduc- plans, there'll be tax dodges and spending shenanigans. f course, 1994 is an election year. As a result, President ton's ambitious legislative agenda—including health-care re-, welfare overhaul, and approval of the 117-nation Gener- greement on Tariffs & Trade (GATT)—faces ey trouble. The Hill's pay-as-you-go rules ate that these expensive initiatives must be nced with new taxes or budget cuts in oth- rograms.

ut don't look for Congress to go that route. nocrats, worried about their fall races, are ing at tax boosts save for a few targeted es—such as cigarette taxes—to finance th care. And budget cuts in existing pro- ns to fund new initiatives might rile voters.



BULLET-BITING. So it's no wonder that Con- ss plans to stretch out health reform and y passage of a welfare bill until next year. T, however, faces a January, 1995, approval dline. In theory, the Administration has to up to $40 billion to offset the loss of in- e from tariff cuts mandated by the pact. instead of biting the bullet, lawmakers are rting to a ruse—suspending the restrictive geting rules adopted in 1990.

he Administration made a stab at finding an honest finance- scheme. Treasury Secretary Lloyd M. Bentsen and White se Budget Director Leon E. Panetta spent weeks trying to a variety of tax hikes, such as a levy on tax-deferred in- tments, and spending cuts to pay for GATT, only to be uffed. "The cupboard is bare," laments Bentsen. Now, the itonites are quietly signaling that funds earmarked in the -year plan for welfare reform could be diverted to GATT. But if all the funds saved for welfare reform through 2000—$9.3 billion—go for GATT, it still won't be enough. Besides, Senate budget rules require a funding formula for 10 years out.

Senate leaders think they have a solution: Use a less restrictive House requirement that financing be provided for only the first five years—which brings the tab to a mere $14 billion. Senate Trade Subcommittee Chairman Max Baucus (D-Mont.) would like to go one better: Scrap the budget rule altogether for GATT. "Pay-as-you-go is like underwear," he explains. "You look foolish and uncomfortable if you insist on wearing the tightest pair you can find."

The logic for suspending the rules rests on the theory that trade liberalization will stimulate U. S. exports and bring in added income taxes that will offset the tariff cuts. But the Administration is hesitant to say that publicly: Republican supply siders will pounce on the "dynamic" revenue-estimate notion to push for a capital-gains tax cut. Then, too, the bond market may panic—fearing a flood of federal "investments" designed to pay for themselves through faster economic growth. "You can't conduct public policy on the premise that an expenditure today that has a good effect ought to be debt financed by our children," says Brookings Institution economist Barry Bosworth.

So far, the Administration agrees that waiving budget rules for GATT would send the wrong signal about its resolve to curb the deficit. But Clinton may be forced to do just that to ensure GATT is approved to take effect next year. Unless the President and Congress can muster the will to pay for their priorities, much of the fiscal discipline and credibility they displayed in 1993 will be washed away in election-year gamesmanship.

By Paul Magnusson

PITAL WRAPUP

DUSTRIAL POLICY

he Clinton Administration's grand scheme to help Detroit's Big Three velop a cleaner and more fuel-effi- ent car is finding the road bumpier an expected. White House techies ad hoped to build the car with al- ost no new federal money by using efense and space research in exotic chnologies such as lightweight ma- rials and fuel cells. But guess what? ommerce Dept. technology chief Mary . Good has discovered the cheap plan on't work. The promising technolo- y is far too expensive for the auto arket and will need costly R&D to ake it commercially viable. If the Administration wants to make the project work, it's going to have to scrounge around for big bucks.

ENERGY

After long delays, two big U. S.-Russian energy deals will soon be signed, White House officials say. A $10 billion project headed by USX's Marathon Oil and McDermott International to tap oil and gas deposits off Sakhalin Island is to be signed on June 23, when Russian Prime Minister Viktor Chernomyrdin comes to Washington. A $6 billion Texaco Inc. project to develop fields in northwest Russia is slated to be inked in September, when President Boris Yeltsin visits the U. S.

SCANDALS

Representative Charlie Rose (D-N. C.) is still chasing Iraqgate—the alleged conspiracy by the Reagan and Bush Administrations to arm Saddam Hussein. Rose has asked the Justice Dept. to pursue charges against Terex Corp. for allegedly giving false information to his subcommittee during a 1992 probe of companies that supplied Iraq with military gear. Rose says a Terex claim that it provided Iraq with 10 dump-truck chassis is contradicted by a recently declassified State Dept. cable, saying Terex shipped 81 dumpers. Terex says Rose "deliberately misrepresented" the truck data.

ILLUSTRATION BY PETER KUPER

A BARGAIN BASEMENT CALLED JAPAN

Discounters spur spending—and may aid an economic recovery

Shiro Kajikawa sounds a bit like a kid in a candy store. Second-in-command at Domy Co., a discounter based in Nagoya with sales of $270 million, Kajikawa has just returned from an eight-day buying spree in California, where he dropped in at the stores of Oakland-based Safeway Inc. Domy already imports Safeway cola, jam, canned corn, and fruit cocktail, and Kajikawa has come back from this trip with such new candidates as lemon-lime soda, cookies, and bottled water. "Everything is cheap in America," he marvels. With Safeway's cola selling in Japan for only 47¢ a can, Domy can undercut the price of local beverages by 55%.

Bargain days are coming to Japan. The flow of inexpensive foreign products is growing, as maverick discounters such as Domy drive a wedge into the traditional maker-distributor cabals. They're slashing costs and prices by using U. S.-style distribution shortcuts, including warehouse outlets. And with more retailers buying overseas, consumers are finally getting a taste of the merits of a strong yen. Consumer spending is expected to jump 1.9% this year, and economists see light at the end of the tunnel for Japan's economy.

The consumer revival is also good news for the U. S. and Japan's other trading partners. For once, Japan may be able to keep its recovery rolling without cranking out even more exports. Indeed, Salomon Brothers Asia Ltd. sees Japan's trade surplus shrinking this year by 7% in volume terms. For President Clinton, that might make it easier to sell Washington's less confrontational Japan policy.

MOVING METAL. Once on the fringes of Japanese distribution, this breed of retailer short-circuits traditional channels in myriad ways. Keiyu Co., a Yokohama used-car dealer, takes unsold autos off the hands of makers' captive retailers, marks them down, and moves the metal. "In the middle of a recession, their revenues are growing by double digits," says Thomas Norton, president of Thomas Norton Associates Inc., a specialist in over-the-counter Japanese stocks.

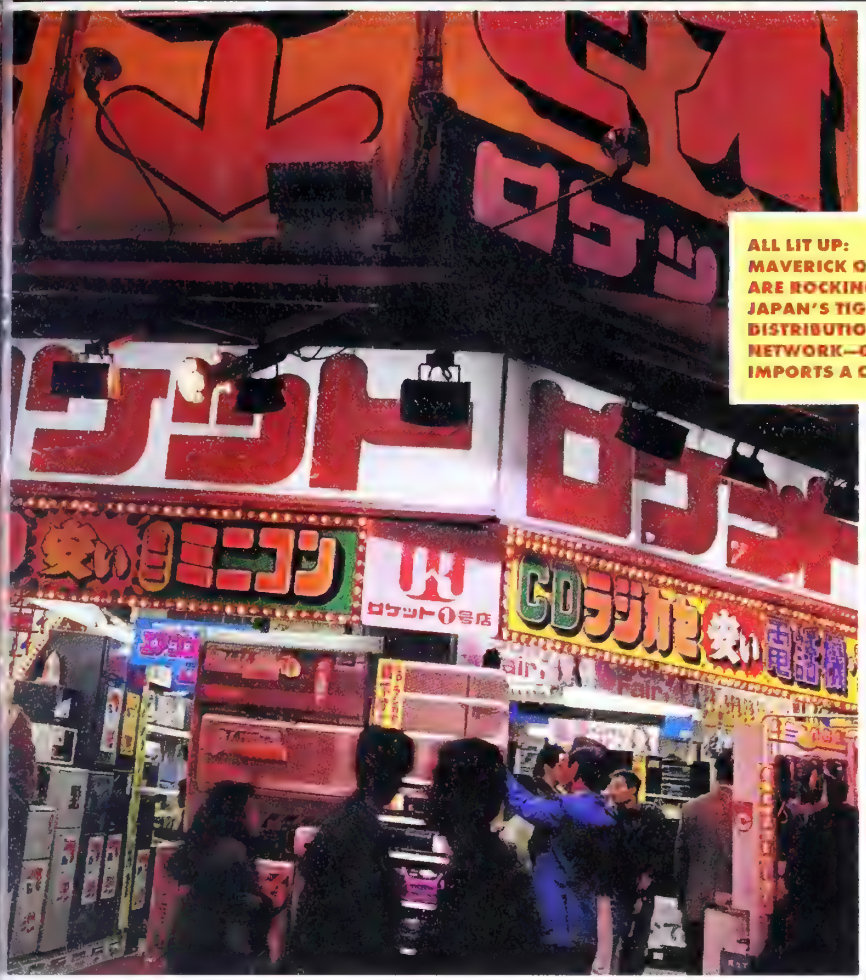
Deregulation is helping the trend along. Japan's retailing law was relaxed in May to permit new outlets as large as 1,000 square meters without prior permission. Limits on store hours and business days per year were also lifted, allowing such retailers as Toys 'R' Us Inc. to stay open more. The result, says Paul Heaton, analyst at Baring Securities (Japan) Ltd., is that more retailers are seeking the wide-open spaces of the suburbs. "Strip malls are coming out all over the place," he says. In Niigata Prefecture on Japan's northwest coast, for example, ArcLand Sakamoto plans two 14,000-square-meter "membership warehouses." The huge stores will sell everything from curtains to chopsticks to soup ladles off the shelves and still in the boxes. The company thinks it can move nearly $50 million in goods a year out of each store.

RED HOT: A MUSCULAR YEN MEANS LOWER IMPORT PRICES. THAT'S RAPIDLY ACCELERATING THE SALES OF FORD MUSTANGS

A MIXTURE OF ECONOMIC TRENDS...

- The 8% drop of the dollar against yen since Jan. 1 cuts prices of imp ranging from Safeway jams to Co computers
- Retail giants offer more low-pri house brands of everything from to soft drinks
- Innovative small companies avo traditional supply and distribution channels to sell such items as eye frames and photo film at cut-rate p
- Foreign retailers such as Toys spark mass-merchandising practic

DATA: BUSINESS WEEK



ALL LIT UP: MAVERICK OUTLETS ARE ROCKING JAPAN'S TIGHT DISTRIBUTION NETWORK—GIVING IMPORTS A CHANCE

Meanwhile, traditional retailers are ng heat from Japanese officialdom. mers at the Ministry of International de & Industry see the inefficient dis- ution system as a drag on the econo- Moreover, Yoshio Terasawa, head of Economic Planning Agency, said last nth that his agency might launch an stigation to find out why some consu- prices aren't dropping in step with lesale prices. Wholesale prices have n falling 2% to 3%, but consumer prices are up at an annual rate of about 1% over the past six months.

A strong yen, up 8% since Jan. 1, is also making importers out of more and more retailers. Nihon Jumbo Co., a discount film processor, undercuts rivals in part by importing cheaper materials from German giant Agfa-Gevaert. Nissen Co., a Kyoto mail-order house, hopes that expanding imports will help it sell $1.3 billion worth of kitchen utensils and clothing this year, 15% more than last year. Since China is the source of much of its stock, the company opened a purchasing office in Shanghai in March. Warburg Asset Management Japan Ltd. likes Nissen's strategy so much that it has bought 3.8% of the company. "Traditional retailing methods are breaking down," says Warburg President Clifford Shaw.

Consumer durables are fair game for the discounters. Japan's largest chain-store operator, Daiei Inc., may soon contract with a South Korean electronics maker to buy TVs and sell them under its own brand name. The sets are likely to sell for $290 apiece—30% less than the cheapest available now.

Retailers are importing foreign expertise, too. Ito-Yokado Co., parent of 7-Eleven Stores Japan, has linked up with Philip Morris Cos. to develop bargain items such as beer, cheese, coffee, and pet food. Since May 18, Ito-Yokado has been selling a cut-rate cola, which it developed with Cott Beverages USA Inc. of Columbus, Ga.

Fresh capital could give retailers a lift. They are already the darlings of the Tokyo stock market. Over the past month, 4 of the 15 initial public offerings on the over-the-counter market have been retailers.

With all the price-cutting, manufacturers are seeing their margins squeezed, but the impact on profits isn't as bad as might be expected. After two years of restructuring, Japanese companies are more efficient. Lower costs mean that even a modest rebound in sales will translate this year into a rise in profits of 20% to 40%. So the discounting revolution is good news for the economy as a whole.

"MORE CANNY." Consumers should get an additional boost this month. As part of former Prime Minister Morihiro Hosokawa's $58 billion fiscal stimulus package, they'll receive a $13 billion rebate on income-tax withholding over the entire first half. Some companies are sweetening the deal: Citizen Watch Co. brought summer bonus payments ahead five days to beat the first-half rebate deadline, doubling the average windfall per employee to $380. Others, including Matsushita Electric Industrial Co., have followed suit.

After three years of belt-tightening, though, Japanese consumers want more than tax cuts. They're demanding lower prices. "The bursting of the bubble economy has made consumers more hesitant, more canny," says Masahiro Morizumi, who follows consumer trends at advertising giant Dentsu Inc. And brand loyalty is fading among younger Japanese, just as their elders are turning into bargain-hunters.

As a result, Japan's new retailers seem to be doing nearly everyone a favor. They're stimulating demand, helping trim Japan's surplus, and knocking down barriers in the retailing network. So the bargainmeisters can be forgiven for talking like visionaries. Kajikawa brags that Domy has been sending scouts to the U. S. for 20 years. "We want to see what's happening in U. S. retailing because we think Japan is going the same way," he says. If he's right, Japan's retailing revolution is here to stay.

By Larry Holyoke in Tokyo, with William Glasgall in New York

...BRINGS BETTER BUYS FOR JAPANESE CONSUMERS

	May 1994 average price (Dollars)	Price drop from year ago (Percent)
ONDITIONERS	$1,506	17%
EN'S SWEATERS	68	15
CASSETTE RECORDERS	508	13
D PROCESSORS	1,350	9
D CAMERAS	1,506	9
KEY*	28	8
CLUBS*	1,354	7

DATA: JAPAN MANAGEMENT & COORDINATION AGENCY

Commentary/by Christopher Farrell

IS THE JAPANESE DYNAMO LOSING JUICE?

For almost two decades, Japanese companies relentlessly grabbed market after market away from their U. S. rivals. A few years ago, the Japanese economic juggernaut seemed ready to wrest global economic leadership away from the U. S., much as world hegemony once passed from Britain to America.

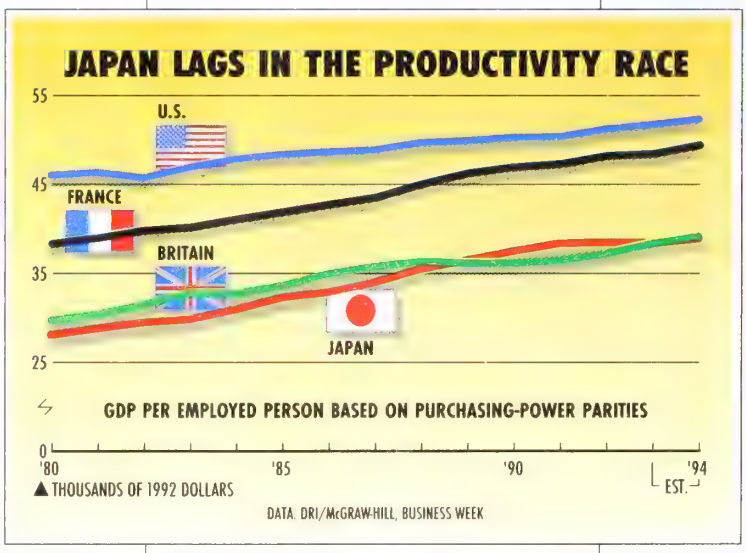
No longer. The U. S. is regaining market share in industry after industry, from microprocessors to automobiles. America's global rebound is partly an exchange rate advantage from the dramatic rise in the yen. And Japan's economy has been mired in its worst slump in the post-World War II era, while the U. S. is well into its economic recovery.

Yet Japan's economic woes could persist long after its business cycle improves. The reason: The highly touted Japanese economic machine is not all that productive compared with the U. S., the world's productivity leader. True, gross national product per worker in Japan rose strongly in the 1970s and the early 1980s, but by the late 1980s it had slowed down considerably (chart). And since 1990, Japanese productivity growth has actually declined. By contrast, U. S. productivity growth has surged ahead in recent years as American companies reaped the rewards of investing in information technologies and overhauling the workplace.

SURPLUS LABOR. Even in 1989, before recession set in, the level of productivity in Japan was only 65% of America's, according to calculations by Angus Maddison, an economist at the University of Groningen in the Netherlands. Despite its vaunted economic successes, a number of Japanese industries are not globally competitive, a situation that may only worsen as its economy becomes more service-oriented and information-intensive.

Indeed, Japan's service industries are quite unproductive. Says William P. Sterling, economist at Merrill Lynch & Co.: "When you do international comparisons, Japan really falls down in service-sector productivity." Adds David D. Hale, chief economist at Kemper Securities Inc.: "The nonmanufacturing sector is where they dump all their surplus labor."

Japan's service industries are inefficient because they have long been protected from foreign competition or shielded from domestic competition by government regulations. In the U. S., deregulation and foreign competition has helped raise service-sector productivity to a 1.6% annual rate in the 1990s, double its 0.8% pace of the 1980s, says Stephen S. Roach, an economist at Morgan Stanley & Co.



What's surprising is that Japan even has some productivity problems in its famed manufacturing sector. Of course, Japan's prowess is unmistakable in such industries as steel, automobiles, and electronics—the very industries that sent U. S. companies reeling in the 1970s and 1980s. And these industries are still the principal cause of Japan's $50 billion trade surplus with America.

But Japan's lead over U. S. rivals in these manufacturing industries is narrowing considerably. For instance, in autos, productivity in Japan was roughly 16% higher than in the U. S. in 1990, according to a recent analysis by McKinsey & Co. Today, U. S. auto makers are about as productive as most of their Japanese rivals. And in some manufacturing industries, Japan lags well behind. Processed food is one of the largest manufacturing industries in both Japan and the U. S., yet Japanese productivity is only 33% of America's. Overall, U. S. manufacturers lead Japan in productivity by about 17% in nine key industries, according to McKinsey.

SAPPED VITALITY. In a comparison of manufacturing productivity among the major industrial nations, William J. Baumol, director of the C.V. Starr Center for Applied Economics at New York University, notes that "other countries are no longer significantly ahead of us in terms of growth rate, while they remain behind us in productivity level."

Why is Japan no longer gaining on America? One answer may be that, over the long haul, Adam Smith was right—competition boosts productivity and protection hinders it. Eventually, a protected economy loses its economic vitality.

For decades, Japan achieved stunning export success while at the same time shielding many of its industries from foreign competitors. But now Japan finds too many of its industries insulated from foreign and domestic competition. They lack the innovative spur needed to prosper in a world economy where new information technologies are transforming both the service and manufacturing industries.

There are signs of change. Japanese managements are trying to restructure their companies, and a growing number of service companies are embracing price competition. The world's second-largest economy also has enormous reserves of strength, including a well-educated workforce. Still, Japan is moving too slowly. By not opening up its markets faster to competition, Japan is not only aggravating trade tensions with the U. S. but, more important, eroding its own productivity.

Farrell is an economics editor.

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EDITED BY ELIZABETH WEINER

ALINAS' SWEET DEAL WITH CASTRO S A BITTER PILL FOR THE U.S.

n the sun-dappled garden of the Mexican ambassador's residence in Havana, a smiling Fidel Castro gently chided Mexican President Carlos Salinas de Gortari for the brevof his first-ever visit to Cuba—only six hours. "The Mexipresident's ability to do things quickly is amazing," Castro a gathering of Mexicans and Cubans. "This is the quickest ial visit we've ever had. But it has been very fruitful."

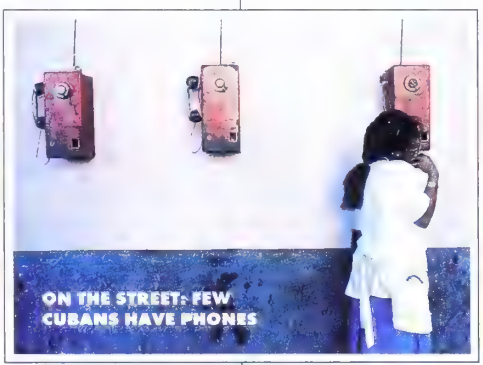
'hat's for sure. Virtually overnight, Mexico has become a's most important foreign investor. During Salinas' whirld visit on June 13, he and Castro clinched an eye-popping l to sell 49% of Cuba's antiquated phone system to a Monrey-based Mexican conglomerate, po Domos Internacional, for $1.4 bil-. That's nearly the estimated value uba's 1993 exports. The deal hands r to the company Cuba's future tele- market. "What they're buying is opulation of 11 million people who 't communicate [by phone]," says n Will, president of Intercom Corp., oral Gables (Fla.) consultant.

ESTEP. It's a lot more than a busis deal. Salinas' personal appearance the socialist island sent a strong ssage back home and to Washing-: Mexico is still independent of the U. S. when it comes to eign policy. With the North American Free Trade Agreent safely behind him, Salinas can reassert Mexico's political economic ambitions in Latin America. And in effect, he is ting his considerable clout behind Cuba's campaign to side the U. S. embargo. "We Mexicans believe the blockade sn't resolve anything. It should be lifted," says Salinas.

While the U. S. is officially mum about the telephone deal, te Dept. biggies are annoyed. "All of these openings the xicans and others have made haven't generated a single imvement inside Cuba," insists one official. Representative ert G. Torricelli (D-N. J.) wants the U. S. to "use all the pressure we can to dissuade" the Mexicans from doing business with Castro. "It's an almost shocking economic decision."

Mexico's up-and-coming moguls don't see it that way. For them, Cuba is a wide-open field for expanding their business empires. The Mexican government may even take a financial stake in Cuba's future: Mexpetrol, a joint venture with Pemex and other Mexican companies, may spend $100 million to resurrect Cuba's Cienfuegos oil refinery, the island's largest.

HARDSHIP. Some see the sweet phone deal as Cuba's way of thanking Mexico for its 34 years of unwavering diplomatic support. Only when Mexico embraced free-market policies in the mid-1980s did relations cool off. So eager was Salinas to clinch NAFTA that he even met in 1992 with Jorge Mas Canosa, leader of the anti-Castro Cuban American National Foundation, to dissuade him from campaigning against the free-trade pact.


ON THE STREET: FEW CUBANS HAVE PHONES

Just how difficult times are in Cuba was clear the day of Salinas' visit, when a dozen people rammed a garbage truck through the gate of the German embassy in Havana seeking asylum. Others have camped out at the Belgian embassy for weeks. Recognizing the economic hardship that led to such actions, Mexican legislators recently voted to donate a day's pay to buy oil for energy-poor Cuba.

It was a symbolic gesture at best. But symbolism has paid off for Salinas as well as for Castro. When Fidel gave Carlos an *abrazo*, it was clear that the former champion of Latin American revolutionaries was more than ready to deal with Mexico's chief free-marketer. That message surely hit home in Mexico, where the Zapatista rebels just rejected a government peace proposal. For Salinas and Castro, it was a win-win day. For the U. S., it was a shutout.

By Geri Smith in Havana, with Gail DeGeorge in Miami and bureau reports

OBAL WRAPUP

WER FOREIGN DEVILS

At first glance, the statistics are startling: Foreign investment in ina dropped 50% in the first quarter mpared with the same period in '93. t it's not as bad as it seems. For one ing, the new tax system, which trims eferential treatment for foreign inestors, may be contributing to the lloff. There's also some heavy competion from the rest of booming Asia. donesia recently liberalized investent regulations, and Vietnam and Ina are opening up as well. Taiwanese terest flagged after 24 tourists from aiwan were murdered in China on ar. 31: Investment fell off 60% from a year earlier in April alone. Given China's growing labor unrest and skyrocketing property prices, some investors may indeed be having second thoughts.

But analysts say the picture for Beijing is hardly bleak. After all, 1993 was an extraordinary year: In that first quarter, investment hit $3 billion, a 167% increase from 1992. "The figures may have dropped 50% from the peak, but we're still talking about a lot of money," says a Western diplomat in Hong Kong.

Some also argue that the slowdown—and especially the tightening of tax breaks—could help squeeze out some of the shadier "foreign" investors. Chinese corporations often set up companies, called false foreign devils, in Hong Kong and Macao, which then reinvest money in China to be eligible for the tax breaks reserved for foreigners. "What we're seeing may not necessarily be a drop-off in 'real' foreign investment," says a Hong Kong analyst. "It's a drop-off in Chinese companies that were taking advantage of an abnormal tax system." In Guangdong province, for example, investment from Hong Kong and Macao—places where Chinese companies are commonly set up—is down. But investments by companies from Britain, France, the U. S., Australia, and Thailand are up by over 50%.

By Joyce Barnathan in Hong Kong

T. ATLAN SYGMA

WHY SAM'S WANTS BUSINESSES TO JOIN THE CLUB

Corporate customers could revive Wal-Mart's warehouse stores

It's not often that giant Wal-Mart Stores Inc. feels the need to defend itself. But at the overflowing annual meeting on June 3, Chief Executive David D. Glass tried to assure employees and investors that there was no cause for dismay over Wal-Mart's $14.7 billion Sam's Clubs division, despite 11 consecutive months of same-store sales lagging behind prior-year levels. The warehouse-club industry "should not be written off," Glass maintained. "We believe it's alive and well and thriving."

A few years ago, such optimism would have gone unquestioned. But brutal competition, price deflation, and general economic malaise have pummeled the club operators. The shakeout led Price Co. and Costco Wholesale to merge, and Kmart Corp.'s PACE Membership Warehouse to close. Analyst Robert F. Buchanan of NatWest Securities says the formula of bargain-priced goods in no-frills warehouses has "become somewhat stale."

"OFF FOCUS." Sam's, in turn, is on the spot. After acquiring 99 of PACE's 113 stores last year, the chain is the No. 1 player in the $39 billion club industry. Its lackluster results have been a key factor in Wal-Mart's sluggish stock, which trades around 25, down from a 52-week high of 30½ last November. Wal-Mart, which drew 22% of its revenues last year from Sam's, knows the warehouse-club unit has to change. "What was once an exhilarating concept needs some new lifeblood," says Wal-Mart Director Jack C. Shewmaker. Adds Executive Vice-President Joseph P. Hatfield Jr.: "We've gone through some tough times. We got off focus a little bit."

To get that focus back, Wal-Mart is returning Sam's to its roots—the office managers, convenience-store operators, and other businesspeople who come to warehouse clubs to stock up on products from paper goods to soda. Despite the image of clubs as havens for big families and budget-minded penny-pinchers, businesses, in fact, are the core market, accounting for about 70% of sales. Sam's executives admit they have spent too much time recently chasing after individual consumers. So they're tweaking Sam's product mix and packaging to get more sales to business customers. They've created a 225-person sales force targeting larger businesses and have gone into direct marketing.

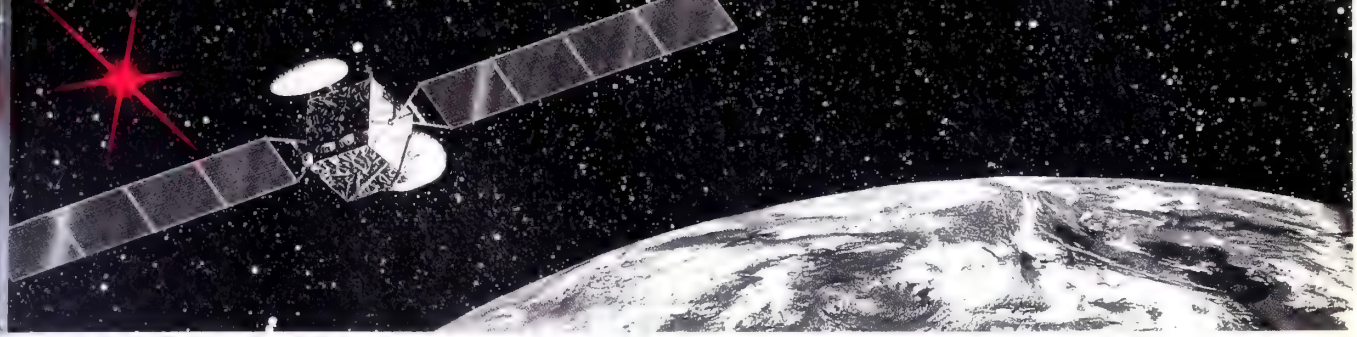
Sam's has more reason than its rivals to focus on business customers. It must avoid cannibalizing sales from Wal-Mart's regular discount stores and combination grocery-and-general-merchandise units, known as supercenters. "We're going to have a supercenter sitting close to us in the year 2000 in just about every location we're at," says Hatfield. "If we don't figure out how to drive the wholesale side of the business, it's going to be pretty tough to survive."

Moreover, Sam's remains a key element in Wal-Mart's growth plans. The division, which had 419 stores in the U. S. at yearend, is planning to add [illegible] clubs this year. It also is expanding t[illegible] number of Sam's warehouses in Mex[illegible]co—where it currently has 10 clubs [illegible] part of a joint venture with Mexican r[illegible]tailer CIFRA—and plans to introduce t[illegible] concept to Brazil and Argentina.

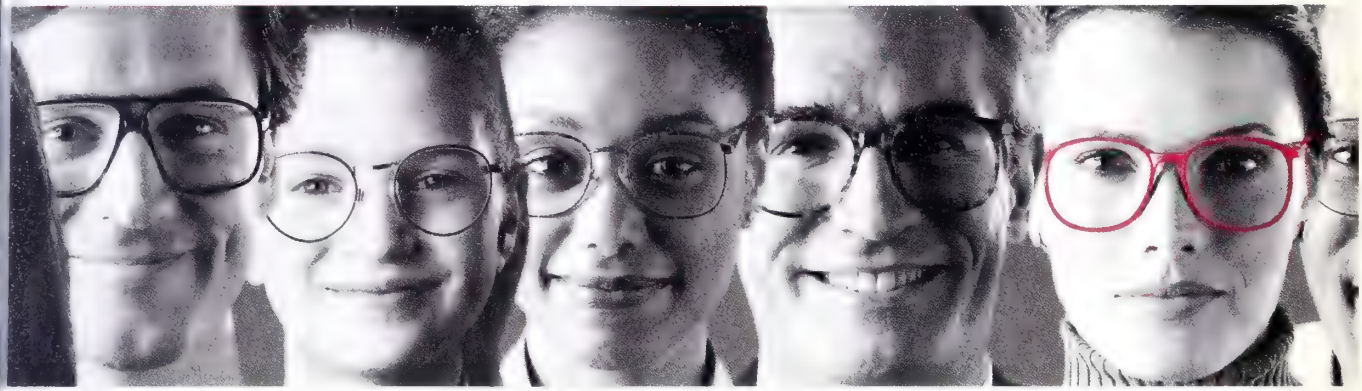
Wal-Mart executives say cutthro[illegible] competition among clubs masked Sam[illegible] strengths. In its drive for dominanc[illegible] for instance, Sam's built multiple stor[illegible] in the same market, though it knew th[illegible] short-term result would be lower sal[illegible] at those units. While same-store sal[illegible] have slumped, Sam's has hardly run o[illegible] of steam. Analyst Buchanan expec[illegible] Sam's total sales to jump 31%, to $19[illegible] billion this year. He projects operatin[illegible] earnings to rise 30%, to $288 million.

But long term, with saturation in th[illegible] U. S. market looming, the key to the c[illegible] vision's prospects is its ability to boos[illegible] volume from individual stores. Henc[illegible] the focus on business customers. Sam' believes its buying clout and economie[illegible] of scale will enable it to offer product[illegible] at prices 40% to 50% lower than th[illegible] wholesalers and distributors it will com[illegible] pete against. Sam's is targeting about [illegible] dozen business categories in particular[illegible] Hospitals, nursing homes, and othe[illegible] health-care providers are one: In abou[illegible] 40 clubs, Sam's is testing selling a selec[illegible] tion of medical supplies, from wris[illegible] splints to wheelchairs. The chain is also[illegible] rolling out products aimed at janitoria[illegible] companies and hotel/motel operators[illegible] including items such as floor stripper[illegible] and institutional sheets and towels.

Sam's is trying to land procuremen[illegible]



Who helps Hughes Aircraft's business reach new heights?



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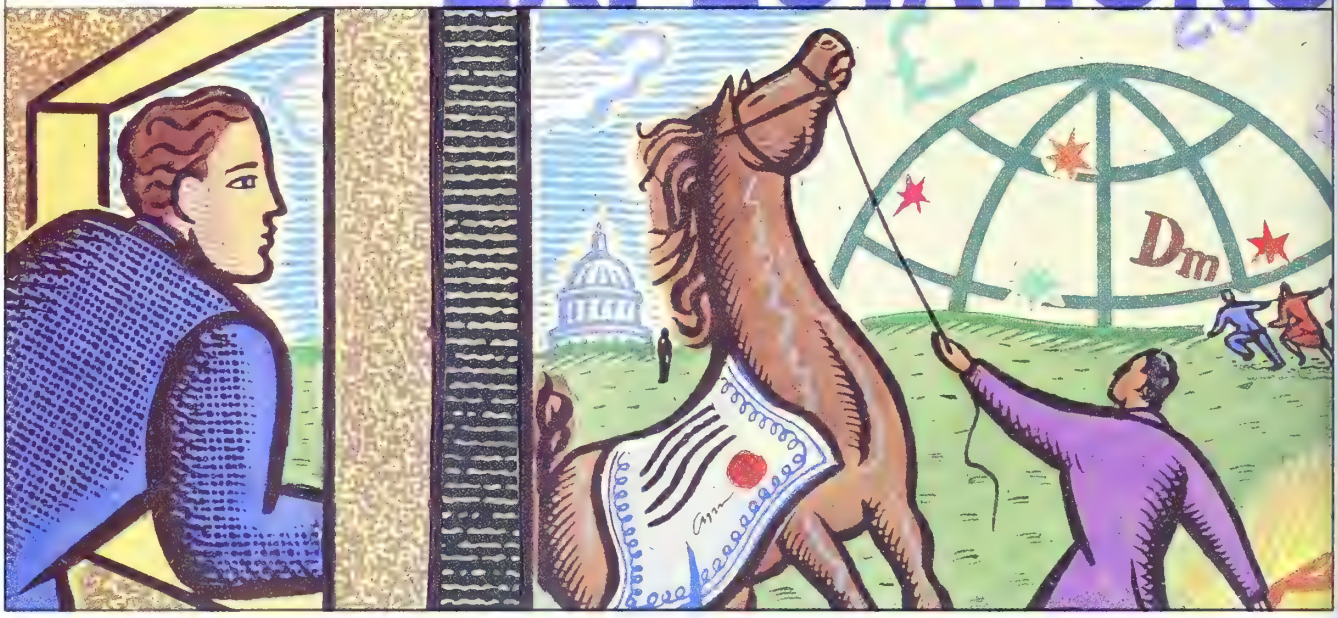

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ness from big companies, as well. king with GE Capital Corp., it devel- a system to offer billing and pur- e-order tracking for customers that ally haven't been able to take ad- age of cash-and-carry warehouses. Mart says the program, dubbed 's Club Direct," has landed 7,200 accounts from schools, governments, corporations.

nd Sam's plans to start testing elec- ic kiosks in a handful of stores, to pete better with the broad selec- offered by some wholesalers and "category killers" as Home Depot and Staples Inc. The goal is to en- customers to order products not ted in the clubs, with delivery direct the manufacturer or arranged by 's for a fee.

PLAINTS. Cracking new business-to- ness markets will not be easy. The of a major food-service company competing with Sam's says that aurants want more than the lowest e. He says his salespeople also help restaurants on issues from menu de- to marketplace trends. "Warehouse s to date don't have that kind of as- nce," he says. Avis Inc., meanwhile, ld like to buy copy paper for its hundreds of locations through Sam's. But Sam's won't bill each location directly or deliver less than a full truckload, says Joy Strommer, a senior buyer at Avis. Sam's says it offers those services, but for a fee.

Sam's executives acknowledge that they must move carefully. The club business is built on limited selection, high volume, and thin margins. Company managers say they're keeping a close eye on added costs. For example, they are dropping old items as they add new ones. To make room for heavy-duty cutlery, bus trays, chafing dishes, and other restaurant goods, Sam's cut the number of traditional housewares it carries from about 60 to 25 items. In all, the chain has eliminated about 10% of the products it had stocked.

> Not to forsake individual customers, Sam's will sell "treasure hunt items" like discounted jukeboxes

And there are other, more subtle changes. Instead of offering Listerine in gallons, as clubs usually do, Sam's is packaging the mouthwash in packages with three travel-size 4-ounce bottles—a much easier size for convenience stores to sell. Sam's isn't forsaking individual consumers; it expects some to like the notion of being able to buy restaurant-quality cutlery. And it has set up a new buying group to find "treasure hunt items"—high-priced goods at deep discount, such as jukeboxes and grand pianos—that keep Sam's upscale consumers coming back.

Is it enough? Sam's has several forces in its favor. Analysts expect the chain to begin reaping the benefits of the consolidation in the club business. Indeed, Sam's executives expect same-store sales for the year to wind up ahead of 1993's. And the potential for growth looks strong. "There are so many business-to-business opportunities these guys have not begun to tap into," says consultant Daniel W. O'Connor of Management Ventures Inc. But to snare these opportunities, Sam's must prove that it can match its sheer muscle with marketing finesse.

By Wendy Zellner in Bentonville, Ark.

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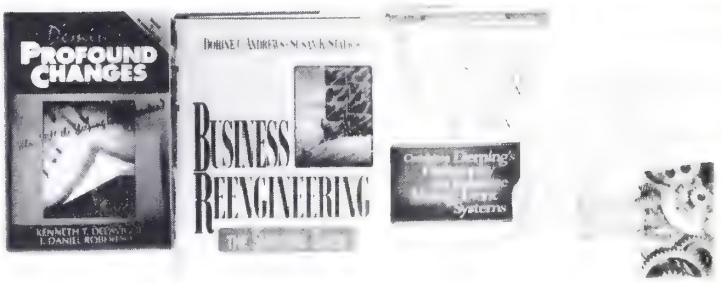

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THE HOT TANDEM AT MOLTEN METAL

Chris Nagel and Bill Haney are out to recycle hazardous waste

As the man in charge of helping students and faculty at Massachusetts Institute of Technology market their inventions, John T. Preston has seen thousands of ideas. Most never make it off the drawing board. But one day in 1987, a young grad student named Christopher J. Nagel approached Preston after a lecture with a concept that set his pulse racing. Before coming to MIT, Nagel had patented a novel way to dispose of hazardous wastes by dissolving them in a bath of molten metal. The concept was a potential blockbuster, Preston realized. The problem: Nagel had zero business experience, and his hazy notions about how to commercialize his idea lacked coherence.

Two years later, the solution walked through Preston's door in the person of William M. Haney III. Although just 27 at the time, Haney was already a hotshot environmental entrepreneur. His first company, which he started when he was a freshman at Harvard University, provided technology that helped furnaces burn more cleanly and efficiently. Having sold that company for $200 million—and pocketing $15 million—Haney was looking for something else to run. Like an old-fashioned matchmaker, Preston introduced the engineer and the entrepreneur.

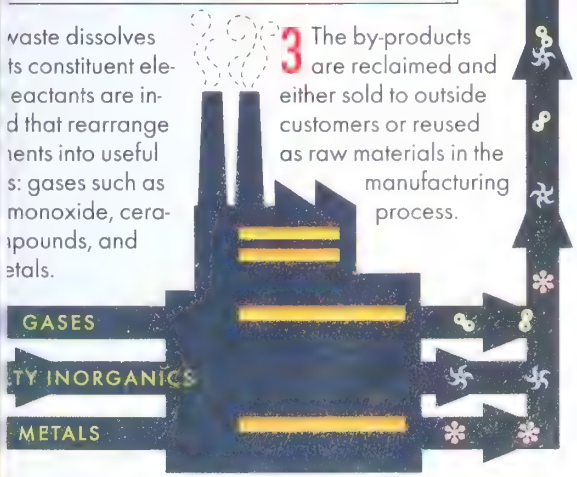
Thus was born Molten Metal Technology Inc., perhaps the hottest startup in the U. S. environmental industry these days. Run by Haney as CEO and Nagel as chief scientist (Preston signed on as an outside director), the four-year-old company is racing to prove that it can turn Nagel's original idea into a workable technology. It's a daunting task for the youthful duo—Haney is now 32, Nagel 36. Buoyed by the tantalizing possibility that Molten Metal could have a nonpolluting method to clean up the world's filthiest detritus, investor expectations are sky-high. The company, based in Waltham, Mass., posted revenues of just $4.7 million last year but boasts a market capitalization exceeding $500 million. The stock, issued at $14 a share in February, 1993, is now trading at around $23.

So far, Haney and Nagel have been moving at a rapid clip. They've signed up a blue-chip board, raised about $140 million in capital, and built a $20 million pilot plant. What's more, they have persuaded several leading chemical and waste-disposal companies to sign on as backers or customers. On June 7, they got their biggest boost yet. Rollins Environmental Services, the largest commercial hazardous-waste incinerator in the U. S., agreed to license the technology and build up to eight of Molten Metal's $20 million waste units.

HYPED TO EXTREMES? The Rollins order represents a strong endorsement of Molten Metal's approach from one of the stalwarts of the incineration industry. "We think it has marvelous potential for solving lots of tough, chemical environmental problems that competing technologies find difficult to manage," says Nicholas Pappas, Rollins' president. But, he cautions, Molten Metal's brash young team "still has to prove it" by getting a commercial unit up and running.

Others complain that the company has been hyped to extremes, given its unproven technology and overcapacity in the hazardous-waste market, where commercial incineration prices have tumbled nearly by half in the past two years. "Even if the process does work, it's not clear that the costs will be competitive," says Philip Barton, who manages the Select Environmental Services Fund for Fidelity Investments. "It's an interesting technology, but the risks are too high to justify a $500 million market cap."

Molten Metal's technology sounds like a kind of modern alchemy: Inject waste into a bath of molten iron heated to 3,000F (table). The iron molecules bond with the carbon in the waste, dissolving it, like pouring salt into hot water. B adding a variety of reactants, such a oxygen, into the molten mixture or b changing the operating conditions, Mo ten Metal can transform the waste int useful products—industrial gases, ceram ics, and metal alloys, for example. Th technology—in essence recycling hazard ous waste—theoretically could work fo



rything from polychlorinated biphen- (PCBs) to used electronic circuit rds. And in theory, it's completely polluting—free of the toxic ash or orne emissions of incineration. "We take something that people view as ability and turn it into something iable," says Nagel.

With their very different personalities, Haney and Nagel seem to make a good team. Thin, intense, and bookish, Nagel works long hours with his staff of engineers and chemists, dreaming up new applications and poring over data from the company's test plant in Fall River, Mass. He seems relieved not to be bothered with daily business tasks and happily gives Haney most of the credit.

EVANGELISTIC VISION. The ebullient Haney is constantly moving around the country, meeting with regulators, customers, and investors. Blessed with an easy charm, a silver tongue, and political connections—he counts among his contacts Vice-President Al Gore—Haney can switch effortlessly from price-earnings ratios to charting complex chemical reactions on his office blackboard. "Bill is a wonderful salesman because he instantly comprehends the level at which to gear his conversation to get his point across," says James B. Anderson, a Molten Metal director who runs the venture-capital arm at Travelers Insurance Cos., which has invested $15 million in the company.

Inside Molten Metal, Haney and Nagel have created a loyal group of dedicated young staffers, many of them lured by an evangelistic vision of environmental revolution. They wander around in T-shirts and jeans, a casual tone underscored by the ping-pong table outside Haney's office and the game room down the hall.

Even as kids, Nagel and Haney seemed to be headed for their current roles. Keenly interested in chemistry in his native Royal Oak, Mich., Nagel recalls nearly blowing himself up in seventh grade by dropping a small piece of sodium into water. "I had to wear eye patches for a couple of weeks," he says, laughing. Haney, growing up in Portsmouth, R. I., had a paper route, sold greeting cards door-to-door, painted houses, and even had a summer job erecting circus tents.

While on nearly full scholarship at Harvard, Haney and a classmate launched FuelTech Inc., based on a new fuel-saving process they had licensed from an inventor. Parlaying connections made through parents of fellow Harvard students, Haney raised millions in capital, most of it overseas. He soon found himself running a multimillion-dollar business while still attending classes. "I remember going to a meeting with an adviser to Margaret Thatcher and frantically trying to finish a term paper in the taxi," he says.

Nagel, meanwhile, had graduated from Michigan Technological University and was working as a chemical engineer at U. S. Steel's huge Gary (Ind.) works. His job, finding ways to cut energy costs in steelmaking, eventually led him to muse about feeding such waste material as tires into the blast furnace. Along with Professor Robert D. Bach at Wayne State University, Nagel invented the basic Molten Metal technology.

Realizing Molten Metal needed experienced help, Haney sought out big-name partners. DuPont Co. signed up to help fund the pilot plant, while Fluor Daniel Inc. agreed to provide the engineering muscle to build commercial units. Maurice F. Strong, the Canadian industrialist who organized the 1992 U. N. environmental conference in Rio de Janeiro, agreed to invest in the company and serve on its board—his only outside directorship. "I've seen a lot of new environmental technologies over the years," says Strong. "But I've never seen anything that's excited me as much as this."

RADIOACTIVE MOUNTAIN. Still, some customers stress that the Molten Metal process won't be proved until it's up and running at a commercial site, which isn't likely to be until late 1995. Among their questions: Will the unit be robust enough to operate nearly around the clock, year-round? Can the process work as well in a less-controlled environment where the waste feeds vary more? And will the unit prove as safe and pollution-free as advertised? An accident or even failure to meet promises could severely dampen the company's prospects.

One potentially lucrative avenue of business: The U. S. Energy Dept. is examining whether Molten Metal's technology could be used for its mountain of low-level radioactive waste. Although the process won't remove the radioactivity, it could cut the volume of waste at least tenfold, slashing the storage cost.

Ever the salesman, Haney waxes poetic about future possibilities. As Molten Metal's scientists understand the process better, he says, they will be able to make more-valuable end products, such as stainless steel, dramatically improving the economics of the system. Haney even predicts that one day, the technology could be advanced enough to recycle the billions of tons of municipal waste that the world is now burying and burning. Imagine turning soiled diapers into industrial gases. Now that would truly be modern alchemy.

By Mark Maremont in Waltham, Mass.

ADVANCED TECHNOLOGY
Now emerging from Microsoft's R&D lab: "Tiger," a video server, and TV set-top box software. Other projects, such as "digital money," are further off.
ON-LINE SERVICE
By yearend, Microsoft plans to roll out Marvel, its first on-line service.
CONSUMER SOFTWARE
Microsoft's fastest-growing group is creating multimedia programs for the home, including kids' titles and reference works.
NETWORK COMPUTING
Windows NT had a slow start, but new network packages are coming including a reworked NT and "Touchdown," a messaging program.
TELEDESIC
Gates invested $5 million in this venture to create a far-flung satellite network.
OFFICE EQUIPMENT
"Microsoft At Work" project aims to link PCs with smart copiers, phones, and PDAs.
CONTINUUM
A software company started by Gates to license electronic art. Microsoft has acquired multimedia technology from Continuum.
DARWIN
Another biotech startup using computers to study genes and design new drugs.
BILL GATES: THE NEXT GENERATION
MICROSOFT PROJECTS
GATES'S PERSONAL INVESTMENTS

BILL GATES'S VISION

HE'S PUSHING MICROSOFT PAST THE PC AND ONTO THE INFO HIGHWAY

You wouldn't exactly say he's panicking, but William H. Gates III is concerned about the future. Sure, his net worth is approaching $8 bil-
Sure, Microsoft Corp. is at the
ht of its powers and this month will
e out its fiscal year with revenues of
billion, aftertax margins of 25%,
$3 billion in cash. And at around
Microsoft stock is at an all-time
. But Gates has spent a lot of time
ing into the future lately.
/hat he sees is that in a world of
erful, high-speed networks—both
in companies and across the so-called
rmation Superhighway—it won't do
ist be the king of desktop computers.
ntually, these networks will shift the
puter industry's center of gravity
y from the desktop. Over time, the
—both wired and wireless—will take
computing everywhere,
making what happens on conventional PCs less important. The powerhouse companies may be the ones who own the network or the content delivered over it.

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Gates has also taken a
at the past and seen that in gener-
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le them great, companies such as
or Digital Equipment Corp. underes-
ated the potential of newer develop-
nts. And Gates is determined to
ke sure that that doesn't happen to
rosoft. "Companies in this business
e often lost their way," says Gates.
e will not fall short for not having an
ansive view of how technology can
used."

The 38-year-old Gates has no problem painting an expansive vision of the coming era. The Information Superhighway, he says, is the first exciting new opportunity since the invention of the personal computer. Just as the PC's cheap and abundant processing powers revolutionized computing in the 1980s, he says, an explosion of low-cost, high-capacity networks will radically alter how we use technology in the coming decade. "Personal computing was qualitatively a very, very different thing than the computing that came before," says Gates. "The advances in communication likewise will create new ways of using communication for learning, education, and commerce that go far beyond anything done to date."

> "Our software will be used in the home, in the pocket, and in the car"

NO ESCAPE. To make sure Microsoft catches that next technology wave, Gates is pushing the software giant into every corner of the Info Highway business. That includes programs to control the computers and other gadgets we'll use to tap into the network, the software to run the net, and the content and services that flow across it. Gates envisions all sorts of devices—PCs, personal digital assistants (PDAs), digital televisions, and as-yet-uninvented products—tapping into the same high-bandwidth networks, scooping up multimedia information, and connecting with dozens of on-line services. "Our software will be used in business, in the home, in the pocket, and in the car," he says. "We're making a big bet on that."

Indeed, if Gates's plan succeeds, you won't be able to escape Microsoft's software. It will accompany you on vacation, sitting in a pocket device that pays your bar tab. It will ride in your car, mapping out the best route to your destination. It will control your appliances and feed programs and information to an entire city's television sets. It will let you browse through a world of merchandise and services from your home and business, with a royalty going to Microsoft each time you do so.

The vision will also take Microsoft into completely new businesses, such as on-line services. Gates isn't talking publicly about the first such project, code-named Marvel, but it's expected to start up by the end of the year. Initially, it may be little more than a glorified help line for Microsoft customers with a few entertainment services thrown in. Eventually, according to analysts who have been briefed by Microsoft, Marvel will be a full-blown service akin to America Online Inc.—with news, chat lines, and shopping. They say that it will resemble Apple Computer Inc.'s on-line service, eWorld, which uses a shopping-mall format.

The new businesses, in turn, will pit Microsoft against a whole new array of competitors. Many, especially cable-TV and telephone companies, will be far more powerful than any software rivals. Instead of IBM, Gates's biggest worry could become AT&T, which also wants to be a kingpin in the Superhighway era. And as of now, it's allied with Microsoft's bitterest rivals: Novell Inc. and Lotus Development Corp. "AT&T and Microsoft will be significant competitors as computers and communications converge," says Rick G. Sherlund, an analyst at Goldman, Sachs & Co.

Meanwhile, as he pushes Microsoft into new areas, Gates is also opening up opportunities for himself. In a series of investments, the billionaire has been diversifying his personal portfolio be-

yond computers and software. Over the past few years, he has plowed $23 million into biotechnology startups and into research, and he recently put up $5 million to help Craig O. McCaw plant the seeds of Teledesic, a hugely ambitious 21st century satellite venture (page 62). Gates stresses that his private dealings are no big distraction. "I invest in things, but that's on my own time," he says.

MIDNIGHT OIL. To be sure, Gates is hardly turning his attention from his original brainchild. He is still intimately involved in daily operations as well as long-range planning. And his marriage, on New Year's Day, to Microsoft Marketing Manager Melinda French, has done little to slow his pace. "I go home by midnight almost every night now," Gates says. Before, it was common to see his Lexus at the company's Redmond (Wash.) headquarters at 2 or 3 a.m.

The late nights are more than habit. With 14,773 employees, dozens of product lines, and marketing subsidiaries in 42 countries, Microsoft has become a complex enterprise to manage. It's also struggling with the cost of its own success: There are 55 million Windows customers and thousands of software developers selling Windows applications, and Microsoft can't abruptly jump to new technology that would make the old software incompatible. That complicates the difficult task of bringing out upgrades. Last year's big product, Windows NT, arrived months late and missing some key components. This year's No. 1 project, Chicago (also known as Windows 4.0), has also slipped. It was due in the first half of 1994, and now Microsoft is scrambling to meet a new yearend deadline. Chicago is supposed to boost performance by merging Windows with a new version of the MS-DOS operating system and will have lots of built-in communications features such as electronic mail.

This is not to say that Microsoft is in any real danger—yet. Analysts, for example, expect upgrade revenues from Chicago to rack up a cool $1 billion in the first year. But a slowdown in desktop software is inevitable. Microsoft's revenue-growth rate has already fallen from 50% in 1992 to around 20% for fiscal 1994. And growth in some categories, such as word processing programs and spreadsheets, could slow to single-digit rates. "For the next three to four years, Microsoft is fine," says analyst Betty J. Lyter of Montgomery Securities Inc. "But further out, it absolutely has to work for new markets."

So far, reaching new markets beyond the desktop hasn't been easy for Microsoft. Its first big move—up the wire from the desk to the server computers that manage PC networks—has been halting. LAN Manager, a network operati system introduced in 1989, has nev caught on as more than a niche produ And Windows NT, a server operati system, has made little headway agai programs such as Unix or Novell's N Ware (page 60).

Microsoft hasn't had any better lu with software for non-PC equipme Winpad, a special version of the W dows operating system for PDAs th has been under development for s years, is still not ready. That's one re son Compaq Computer Corp. recent shelved plans for a new line of tiny n chines called Windows Companions c signed around Winpad, analysts sa Winpad is part of a larger project, call Microsoft At Work, that i beds Microsoft software in fice equipment, such phones, fax machines, a copiers that then can be co trolled by PCs. But a year ter introduction, only a fe machines with At Work a out. That may be just as we since the PC software to r them won't arrive until Chic go ships.

SUCKER BET. Those setbac don't bode well for Microsof prospects on the incredib complex Info Highway. O key technology it is trying supply, so-called video ser ers to store and distribute gitized movies, will requi sophisticated database so ware to funnel the signal thousands of homes and keep track of who saw wh for billing purposes. But M crosoft has little experien in databases that run on an thing but desktop systems. database of digitized vid "pushes the limits of even company like Oracle, whic has been in the business f years," says Gerald D. Held, senior vic president of Oracle Corp., the leadi supplier of database software for mi computers and servers. "It would be gigantic leap for a company that's on been on the desktop."

But Held and other software exec tives also know it's a sucker bet to wri off Microsoft. Even when the first ve sions of its products are so-so, Micr soft keeps plugging away until the work. Windows is a case in point: wasn't until Windows 3.0 was introduce in 1990—five years and hundreds of pr grammer-years after the widely deride Windows 1.0—that the graphical pr gram really took off. The company al

INFORMATION SUPERHIGHWAY NATHAN MYHRVOLD is Microsoft's chief technology guru. In May, he unveiled a video server called Tiger, designed to deliver digitized films and TV shows across cable or phone networks

ame slow starts with its adsheet and word pro- ng product lines, which jockey for first place in respective markets with s and WordPerfect Corp. ites is famous for his Jap- e-style tenacity. "He fol- somebody's taillights for ile, then zooms past," In- Chief Executive Officer ew S. Grove pointed out Microsoft executive re- y. But that modus oper- won't serve in the un- ted territories of the al future. "Soon, there be no taillights left," e predicted.

iat's why Gates is putting uch into research and hir- lots of new talent. The pany's research and de- opment budget has grown ore than $600 million, and budget for the Advanced earch group, where the t leading-edge work is , is approaching $150 mil- a year. For the past sev- years, Gates has been ig people whose expertise extends beyond the PC—including sociologists, ists, and at least one ethnomusicol- t. He is also recruiting seasoned ex- ives from outside the PC business, ging from supercomputer engineers novie special-effects experts. The pany is also said to have an open kbook ready for recruiting big-name timedia and Hollywood talent.

-WAY WRISTWATCHES. The most im- ant recruit, perhaps, is Nathan P. rvold, Microsoft's senior vice-presi- for advanced technology. Myhrvold, D in theoretical physics and a soft- e entrepreneur, is Gates's chief tech- gy guru and the head of the Ad- ced Technology operation. Among r assignments, he is overseeing ef- s to build chunks of the Information erhighway.

CONSUMER SOFTWARE PATRICIA STONESIFER runs one of the fastest-growing divisions, with 660 employees pumping out three new multimedia programs a month—just a hint of what Microsoft plans for interactive TV and on-line services

In May, Myhrvold unveiled one of Microsoft's most ambitious projects, video server software called Tiger. The setup, networking potentially thousands of "motherboards" and disk drives, is designed to serve up digitized movies and television shows across cable or phone networks. Tiger is just "the first piece" of an end-to-end interactive video system, says Myhrvold. "We were struck by how comprehensive their approach to the problem was," says Bruce W. Ravenel, vice-president for technology at cable giant Tele-Communications Inc. TCI plans to use Tiger servers in interactive TV tests, including in a joint trial with Microsoft in Seattle. Microsoft also has landed a Tiger test with Rogers Communications Inc., Canada's largest cable operator.

Microsoft is also interested in the receiving end. It is writing software for navigating through hundreds of program choices. And it is writing software for set-top boxes being developed jointly by Intel Corp. and General Instrument Corp.

Advanced Technology's charter does not stop with high-tech TV. Researchers are cooking up a series of gizmos they refer to as "hardwear"—computing and communications devices to be carried or worn at all times. One team is working on the idea of a portable computer that fits in your pocket or clips to your belt, sending wireless messages to and from your home or office computer so you can keep your office—and important data—with you at all times. And, shades of Dick Tracy, another effort is aimed at computers as easy to wear and ubiquitous as wristwatches. Myhrvold's

gang has even tossed around the notion of a chip embedded in the heel of your running shoe to automatically clock your speed and distance and count how many calories you burn.

Gates's favorite idea is the "wallet PC," which would hold an electronic version of everything you might keep in a wallet or purse—telephone lists, appointment calendar, credit cards, maps, even money. How? Microsoft has licensed data-encryption technology from a Silicon Valley company called RSA Data Security Inc., which it hopes to use to design electronic money: secure, coded messages transmitted between your wallet PC and your bank, so that you can make purchases without paper or plastic. Such electronic money will be key to doing business across the net.

MAJOR MARKETING. Many of these projects may never see the light of day. And those that do won't be manufactured by Microsoft. The company is tinkering with the designs to discover what kind of software they'll need. It's also making some investments to get a jump on new technology. Microsoft has pumped $35 million into Metricom Inc. and Mobile Telecommunication Technologies Corp., for example, to get a grasp of data-communications technology for handheld devices.

With computers taking on new shapes and reaching millions of new consumers, Microsoft researchers are busy looking for ways to make them far easier to use. That's a big thrust of the company's basic-research effort, headed by Richard Rashid, a former computer-science researcher at Carnegie Mellon University who joined Microsoft in 1991. One of his teams, which is exploring "natural language" programming, arrived en masse from IBM when Karen Jensen, an 11-year veteran of IBM's famed Thomas J. Watson Research Center grew frustrated. Her natural-language project there, aimed at getting computers to understand written English, never really made it to the product stage. "IBM just didn't seem to understand how to commercialize software," she says.

> Microsoft needs more than hot technology, say analysts; it needs partners

At Microsoft, the former IBMers have developed a new system that tries to get computers to understand words by creating elaborate links to every related word in the dictionary. Then, the system compares those links with other words that appear in the sentence or paragraph that it is reading. That helps it interpret what's meant when you type in "Find my expense report," for example. Jensen expects programs that use these techniques to appear within a year. But that won't make Microsoft the first: Oracle recently introduced a program called ConText that also uses natural-language techniques.

While Myhrvold and Rashid focus on long-term research, Microsoft's year-old Consumer Software Div. is paving more immediate path to the Inform tion Superhighway. Headed by Vi President Patricia Q. Stonesifer, the vision is fielding Microsoft's fi products for the home, mostly mu media "edutainment" CD-ROM disks. C sumer Software's sales are running $300 million per year, triple the rate year ago, says Stonesifer. That mak the 550-employee divisi the company's fastest-gro ing unit. Gates says he considering upping the m keting budget tenfold, to staggering $100 millio more than the sales of m software companies. "Wh the heck, our profitabil looks good," shrugs Gat Meanwhile, Microsoft scouring the market for a ditional multimedia "conter On June 13, for example, signed a deal to co-devel kiddie fare with Scholastic Corp.

LEAGUE OF THEIR OWN. More importa the consumer programs—loaded wi sound, video, animation, and graphics are designed to get consumers warm up for the interactive services that M crosoft is planning. The Complete Ba ball disk, for example, includes triv about every major-league team and pla er who has ever been in the game—i cluding clips of famous plays. Using modem, PC owners can download a da newsletter from Microsoft that, for $1.

MICROSOFT'S NETWORK WARES STILL AREN'T CONNECTING

NETWORKING SOFTWARE JAMES ALLCHIN is the networking whiz responsible for transforming Windows NT from a server operating system to the base technology for a host of communications programs

When it was introduced ago, Windows NT wa posed to lead Microsoft triumphant advance beyond the d NT, for New Technology, would Microsoft's software empire to "se the powerful computers at the h the client-server networks incre replacing mainframes and minic ers. After five years of work an million in development costs, Bill was so sure NT would be a hit t predicted it would easily sell 1 copies in the first 12 months. Tod alysts put the number closer to 3 and say only a third are on se Gates's strategic target.

Microsoft's frustrations in netw are nothing new. Its LAN Manager duced in 1989, has done poorly a Novell Inc., whose NetWare has the market. Similarly, Windo Workgroups, a program for sharin

issue, supplies daily ights and automatic up- s of season statistics. ıtually, Microsoft be- s the product will e into an on-line, inter- e video-information ser- about baseball.

ıe on-line push is ex- :d to begin by the end e year with the intro- on of Chicago, which in- :s an icon that, when ed, will launch users Microsoft's Marvel ser- If just a fraction of the ons of Chicago custom- lick on that icon, Micro- could become an over- t giant in on-line ces. In the future, the any's on-line network also be accessible from le devices and TV set- boxes that run Micro- software. That could e interactive services, rding to Goldman Sachs's Rick Sher- "a whole new driver for Microsoft's ness."

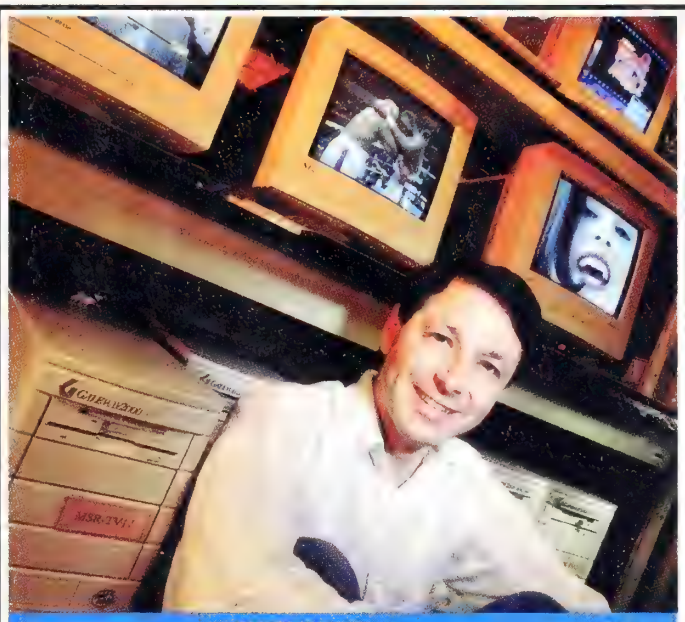
ıturistic software, multimedia, in- ctive TV, on-line services. It's a ful, even for a company with the re- ces of Microsoft. That's why allianc- nay be critical to the company's s for branching beyond the desk- However, Microsoft has earned a tation as an exceedingly tough nego- r. True, Gates has signed deals with and with Rogers Communications and Pacific Gas & Electric Co., the San Francisco-based utility.

But what may be more significant are the deals that Microsoft couldn't nail down. Despite a several-week courtship, including personal visits by Gates, Microsoft was unable to persuade Alex Mandl, CEO of AT&T's Communications Services Group, to use Microsoft software on a network for businesses. The network, which will be offered on an experimental basis this year, will rely on Novell's NetWare and Lotus Notes to let AT&T customers exchange information electronically with branch offices, suppliers, or customers. To add insult to injury, Microsoft's closest PC partner, Compaq, plans to be one of the first companies to use the AT&T Notes network in a pilot application.

Another deal that collapsed was a proposed three-way venture among Microsoft, TCI, and Time Warner Inc. The pact would have created a powerful troika and would have secured a leading software role for Microsoft in interactive television. But executives close to the negotiations say Time Warner balked at Microsoft's demands, which included hefty royalties and limiting or excluding the use of non-Microsoft software. More recently, one telecommunications company says it walked away from a deal to use Tiger technology because of what it regarded as Microsoft's unreasonable terms.

NEW SUITS. Such hardball tactics will continue to inspire fear and loathing among potential Microsoft partners, says William M. Bluestein, an analyst with Forrester Research Inc. The feeling among many companies is that "when you do business with Microsoft, you want to keep your hand on your wallet," he says. "No one is going to bless Microsoft in this new market."

At the same time, Microsoft's aggres-



BASIC RESEARCH RICHARD RASHID is exploring artificial intelligence, speech recognition, and other ways to make software easier to use

oups of workers, has not slowed Lotus Development Corp.'s ıre" hit.

e NT setback could have wider ions. As Gates's ambitions have o has his bet on NT. Now, NT is to be the foundation for a slew ed systems, including Tiger vid- rs, and Cairo, an "intelligent" g system that will, on its own, ormation on a network. NT is base technology for new server ons—programs for electronic ıg, groupware, and network ıent. In short, NT is fundamental 's plan for making Microsoft a cations giant.

went wrong? For one, even Microsoft pitched NT for running works—even whole companies— vare lacked many of the features lications to do so, and it didn't ell with existing computer set- ı as those running NetWare. NT ires lots of computer memory to simple tasks, and like many new software products, it still has a few bugs to be worked out. "NT turned out to be bigger and uglier and slower than anybody had expected," says Stan Hanks, president of NetSmiths Ltd., an Edison (N. J.) computer consultant. Meanwhile, sales of Unix, a mature operating system, are booming in the server market.

RIGHT STUFF. The task of making NT live up to its billing falls to James E. Allchin, vice-president of Advanced Systems. Gates persuaded Allchin, chief technologist at network software maker Banyan Systems, to join Microsoft in 1990. A computer scientist who held most PC software in low esteem, Allchin was reluctant at first. Gates kept pushing because he figured that Allchin, 41, had the right stuff: As a PhD candidate at Georgia Tech in the early 1980s, he had written a program called Clouds that linked several minicomputers together to act like one huge machine. That could come in handy in pulling off all the communications tricks Gates has in mind.

The comeback plan for NT is already in gear. The second release, code-named Daytona, is expected this summer. In addition to cleaning up bugs, Daytona will require less memory and will work with more systems, including NetWare. And Microsoft has been persuading makers of Unix and mainframe applications, such as Computer Associates International Inc. and Oracle Corp., to write programs for NT. Microsoft's own NT programs, such as "Touchdown," a groupware offering, and a revamped SQL Server database, are imminent.

Meanwhile, momentum for NT is starting to build. PaineWebber Inc. analyst Michael Kwatinetz predicts that as many as 500,000 copies of Daytona could sell this year. Still, it won't be until 1995 or 1996 until NT really catches on, he says. "The thing you have to admire about Bill Gates," says Kwatinetz, "is that he understands that making technology prevalent is not a short-term process." Good thing.

By Amy Cortese in New York and Richard Brandt in Redmond, Wash.

ALEXANDER MARKHAM

sive ways have led to some legal tangles. The company recently lost a copyright-infringement suit brought by software maker Stac Electronics Inc. Not only did Microsoft wind up paying Stac $120 million in damages, in early June a judge issued an order prohibiting further sales of a version of MS-DOS that contains the infringing code.

Meanwhile, after the Federal Trade Commission abandoned a two-year antitrust probe of Microsoft, the Justice Dept. has recently expanded its year-old investigation and could bring a lawsuit as early as late summer. A key issue: allegations by competitors that Microsoft uses its dominant position in personal computer operating systems to gain unfair advantage in other PC markets.

But the wheels of justice grind slow By the time a major antitrust suit co be litigated—or dismissed or settle Microsoft may not resemble the PC po erhouse it is today. If Bill Gates c make his vision a reality, he and l company will have found new worlds conquer.

By Richard Brandt in Redmon Wash., with Amy Cortese in New Yor

WHERE BILL IS PUTTING HIS POCKET CHANGE

The second-richest man in the U. S. doesn't like to spend money. He has even been known to drive around for half an hour looking for a parking spot rather than pay $12 for a garage space. Sure, William H. Gates III has had lapses, such as the $600,000 Porsche he bought a few years ago and the $20 million estate he's building on Seattle's Lake Washington. But, he points out, the house will double as a technology showcase and meeting place for Microsoft Corp. Other than that, his only real extravagance is a fondness for cashmere V-neck sweaters.

Gates also hates to waste time on activities outside Microsoft. He takes few vacations and even married a Microsoft manager. "Ninety percent of my net worth is in Microsoft," he says. "That leaves me with some reasonable amount of money—less than 1%—to invest in other things."

PERSONAL INVESTMENTS LEROY HOOD's company is seeking cures for genetic diseases—with a $5 million stake from Gates

So when Gates puts money and time into startups, the interest has to be intellectual, as well as financial. The answer: biotech. "It's a hobby of mine," he says. "Other than computers with great software, it's the thing that's going to change the world the most." Gates is intrigued by the challenge of unraveling genetic codes. "The gene is by far the most sophisticated program around," he says.

Gates also likes to keep his money close to home—in Washington State. In late 1992, he gave $12 million to the University of Washington to start a molecular biotechnology department, thus luring Leroy E. Hood from the California Institute of Technology. Hood is a pioneer in creating computers that map the molecular structure of genes.

Hood subsequently became a cofounder of Darwin Molecular Corp. in Bothell, Wash., in the hopes of using those maps to find cures for genetic diseases. Among the company's goals: AIDS treatments and a "killer gene" to attack tumors. Gates invested $5 million in May, along with Microsoft co-founder Paul G. Allen. With over 10% each, they are its largest shareholders.

Gates is also the biggest shareholder in ICOS Corp., a biotech company near Darwin that studies the way cells communicate with one another on the theory that many diseases develop when cells give each other "bad advice," such as overreacting to a foreign substance. Gates's $6.35 million gives him a 7.5% stake and a board seat.

His investment that has made th biggest headlines is the one in whic Gates is least involved. In March, h joined cellular king Craig O. McCa to fund Teledesic Corp. The Kirklan (Wash.) startup plans to create a wir less phone network by launching 84 satellites. Gates put up $5 millio based on pal McCaw's advice but ha no board seat and has never even me the company's president, W. Russe Daggett. "The regulatory, financial, an technical hurdles make it a real lon shot," says Gates. "But it's very cool i it works."

GOOD QUESTIONS. The only compan aside from Microsoft Gates has starte from scratch is Bellevue (Wash.)-base Continuum Productions Corp., whic has been buying digital rights to art works and licensing them for educa tional programs or other uses by soft ware makers. Gates won't say wha he has invested in Continuum.

It's too soon to tell how Bill's bet are paying off. ICOS, the company clos est to putting out a product, has hit snag. The Food & Drug Administra tion is holding up clinical trials of it multiple sclerosis drug pending mor information. And once Continuum Pres ident Stephen D. Arnold began creat ing interesting interactive programs Microsoft acquired the technology an brought Arnold on board.

If his investments don't pay off, i won't be because Gates hasn't don his homework. "Bill understands bio technology extremely well for some one not in the field," says Darwin's Hood. "The questions he asked u about Darwin were better than thos of some of the veteran venture-capi tal investment bankers and large phar maceutical companies." But then, he's investing his own money, not someon else's.

By Richard Brandt in Redmond Wash., and Dori Jones Yang in Seattle

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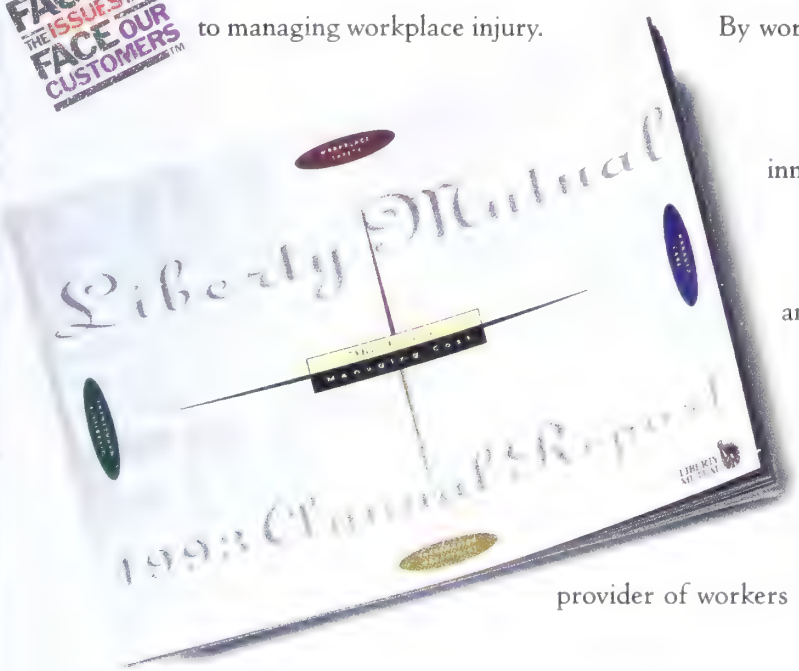

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PROSECUTORS

PUTTING THE COLLAR ON WHITE-COLLAR CRIME

For U.S. Attorney Mary Jo White, it's a "special responsibility"

Mary Jo White is on a roll. After becoming the first woman to head the U.S. Attorney's office for the Southern District of New York a year ago, she has been a close adviser to Attorney General Janet Reno, presided over the successful World Trade Center bombing case, indicted a utility for environmental crimes, and launched sweeping investigations into corruption at two Wall Street powerhouses.

And remarkably, White, 46, has done all that without arousing the animosity that usually goes with running one of the country's most powerful law enforcement offices. "She's a brilliant lawyer and very street-savvy," says Edwin G. Schallert, her friend and former law partner. "But she's also the most down-to-earth, least formal person I know."

White's demeanor is certainly unpretentious. She prefers beer to wine, is a rabid fan of any number of New York sports teams, and when asked will relate tales of her ancestor, the Indian princess Pocahontas. She also has a reputat for relentlessly pursuing cases, wh has helped reinvigorate a staff of la yers and investigators often frustrat under White's more conservative, pa cian predecessor, Otto G. Obermai And she's put Corporate America on tice that the office that brought do Ivan Boesky, Michael Milken, and Dr el Burnham in the 198 is back on the beat. "I office is thriving rig now," says Henry J. I Pippo, a prosecutor w recently left White's st after the trade center case.

WALL STREET IS HER BEAT: WHITE HAS RECHARGED THE NEW YORK OFFICE

Part of what has made White's fi year such a banner one is serendipi She got her job as prosecutors were ready preparing their high-profile ca against terrorists accused of the tra center bombing. And two front-page curities scandals, one involving Kidd Peabody & Co. and the other Prudent Securities Inc., have broken under h watch, making White a center of atte tion on Wall Street (table).

DOGGED. What distinguishes White fr some of her predecessors, say gover ment and private lawyers, is her abili to make the most out of complex cas through creative legal strategies a perseverance. For White, being dogg about white-collar crime is "the spec responsibility" of her office. "Deterren works most in the white-collar area she says. "So I don't think we should t quickly conclude not to go with a crim nal case in the white-collar area."

White's move to charge Consolidat Edison of New York with environment crimes in December is one example her aggressiveness. Some lawyers a vised against it, saying that the ca should either be handled civilly or th only company officials and not Con E should be charged with wrongdoin "That was a very unpopular case for h to bring," says Alan M. Cohen, a whit collar defense lawyer in New York. "B it shows that even though it was goi to lead to criticism, she's going to bri

MARY JO WHITE'S AGGRESSIVE AGENDA

CONSOLIDATED EDISON CO. OF NEW YORK Con Ed was charged in December with failing to report the release of more than 200 pounds of asbestos following a 1989 explosion.

STEVEN HOFFENBERG, FORMER CEO OF TOWERS FINANCIAL Hoffenberg was charged in February with defrauding investors of more than $450 million and of obstructing justice.

KIDDER, PEABODY Prosecutors are probing allegations of phantom trades in Kidder's government-bonds department. They want to know how far up the corporate ladder the scandal goes.

PRUDENTIAL SECURITIES Prudential is under investigation for allegedly misleading consumers about certain investments, defrauding them of millions of dollars.

EMPIRE BLUE CROSS & BLUE SHIELD The insurer is under scrutiny for allegedly misrepresenting its financial condition—a case that indicates White's expansive approach to law enforcement.

What you really want is the goose.

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any case she thinks should be brought."

White's background is more that of an intellectual than a street fighter. She grew up in Virginia, graduating Phi Beta Kappa from the College of William & Mary in 1970. After earning a master's in psychology in 1971, she excelled at Columbia University Law School, making Law Review. From there, she clerked for a federal judge for a year before working for 3½ years in the office she now heads. White left government to be a defense lawyer at tony Debevoise & Plimpton in New York for nine years but returned to the life of a cop in 1991. Says White: "In my heart, I am more of a prosecutor."

Or a detective. In her early law-enforcement days, White was prosecuting two men accused of robbing a bank. A key element in identifying them was tracking down the type of Richard Nixon and Jimmy Carter masks they wore during the robbery. Investigators had failed to find the masks, but White and Barbara S. Jones, now the first assistant district attorney, spent an entire night driving to costume stores, eventually finding the masks at a shop in Manhattan.

RUDY REDUX? If there is one criticism of White, it is that at times she may be too aggressive. In 1991, when White was chief prosecutor in Brooklyn, she reviewed an inquiry into New York Assembly Speaker Mel Miller and his law partner, Jay E. Adolf. Although Miller's lawyer, Gerald B. Lefcourt, argued the case was "at worst an ethical breach," White gave the go-ahead to indict both men for fraud and conspiracy stemming from a real estate deal they handled. A jury found the men guilty, but an appellate court later overturned the conviction, concluding that no crime had been committed. White says she was disappointed and "respectfully disagrees with the court's disagreement."

White's post has been a stepping-stone to bigger things for the politically ambitious. While she hasn't displayed the same devotion to headlines as former U. S. Attorney Rudolph Giuliani, now mayor of New York, White has been mentioned as a possible successor to Reno should the Attorney General tire of Washington or be asked to step down. (White was on the short list of candidates from which Bill Clinton selected Reno.) Since last August, White has chaired the U. S. Attorneys' committee advising Reno, a position that has taken her to Washington almost weekly.

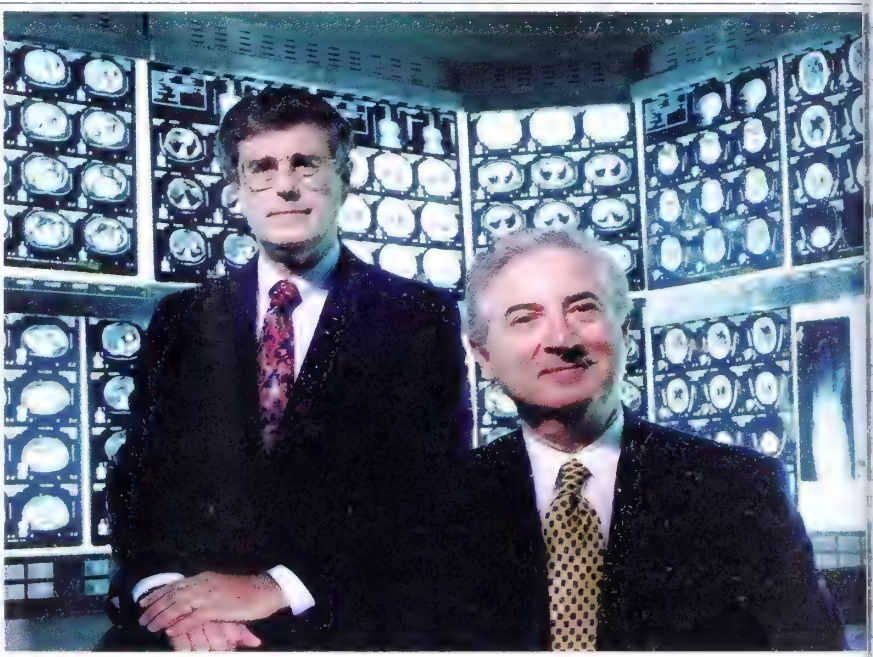
But Washington isn't much on White's mind these days. She's too busy rooting for the Knicks and the Yankees and making plans to visit at least three baseball parks this summer. "My goal is to visit them all," says White. Knowing her, she probably will.

By Linda Himelstein in New York

STRATEGIES

AT AN HMO GIANT, CRITICAL QUESTIONS

Is FHP more interested in profit than the quality of its treatmen



LUCRATIVE NICHE PRICE AND HACKEN'S HEALTH-CARE TITAN FOCUSES ON THE ELDERLY

Westcott W. Price, co-chief executive of FHP International Corp., had good reason to celebrate on June 10. That's the day shareholders in his health-maintenance company, based in Fountain Valley, Calif., approved the acquisition of TakeCare Inc., another California HMO, headquartered in Concord. The $1.1 billion deal is the biggest HMO merger ever. More important, it transforms FHP into a $3 billion titan with 1.7 million members.

Still, the merger wasn't the only FHP deal that had a successful outcome: Just weeks before, the company had quietly hammered out a settlement with Genevieve F. Kinnard, a 68-year-old real estate broker who sued FHP in 1992. She alleged in the lawsuit that the HMO denied her critical medical treatment, agreeing to pay for less than two weeks of badly needed physical therapy at a local hospital instead of the six weeks recommended by her physicians after a hip replacement in October, 1991. As a result, Kinnard says she had to pay for her continued stay at Casa Colina Hospital, well as additional therapy, out of h own pocket. Both sides reached a sett ment on April 26. But the details ha been sealed by the court until July FHP's request. Neither Kinnard nor F will comment.

These two events sum up the ch lenges facing FHP these days. With HM around the country scrambling to bro en their share of the health-care indust FHP's acquisition strategy is clearly cused on one of the market's more luc tive segments: the $159 billion that t federal government spends each year Medicare.

At the same time, the HMO is faci troubling questions about the quality its senior care. And it's not just patie such as Kinnard who are complainir Health-care experts, physicians—inclu ing some who used to work for FH and former FHP executives allege t the company uses aggressive sales tact to sign up seniors and then, in many stances, denies them necessary care in

:o maximize its profits. "They man- lollars, not care," says Dr. Julie Ma- ky, Kinnard's physician at Casa Col- who says she is speaking in broad s about FHP's practices.

nnard's experience, in any event, unique. A class action filed in No- ber against the U. S. Health & Hu- Services Dept. (HHS) charges that agency failed to regulate HMOs that ide care for Medicare beneficiaries. ough the suit alleges instances of in- uate care provided by five HMOs, out of the 15 cases involve FHP. In the suit alleges that Gregoria Grijal- a 71-year-old grandmother in Tucson, forced out of hospitals and nursing es last August by FHP while still suf- g from complications related to dia- s and a recent leg amputation. Grijal- even alleges that her own FHP- loyed "gateway" physician, Dr. Frank ez, urged that she remain hospital- . Gomez won't comment.

ER PROBLEMS. Even some of FHP's staff doctors concede that quality are is an issue. Dr. Orlin Wry, who ks for FHP in Tucson, says some of details in the class action are "prob- true." But Orlin says FHP isn't to ne: As a society, "there are limited ls, and we are producing more elder- nan the system can handle."

While the numbers of documented cas- ren't huge, critics believe other in- ces of inadequate care have gone un- orted. Health-care experts say most ors are unaware of their rights as members. Nor do they have the and stamina to appeal their cases to ide review panels—a process that can e up to four months. e magnitude of the prob- is just beginning to be wn," says Geraldine Dal- director of the Center Health Care Rights in Angeles.

HP will not comment ut any of the cases in class action because it olves ongoing litigation. reover, the company nts out that only HHS has n named as a defendant. its part, HHS won't com- nt on the lawsuit but has d a motion to dismiss the ion, claiming that the intiffs have yet to ex- ust their administrative eals at the agency. Price sts FHP delivers quality e and claims FHP's own veys show that its mem- s are satisfied. Price also nts out that FHP is fully redited by the National nmittee for Quality As-

SHOVED ASIDE? A LAWSUIT ALLEGES FHP FORCED GRIJALVA OUT OF A HOSPITAL TOO SOON AFTER A LEG AMPUTATION

surance, an industry-sponsored group that sets HMO standards. Often, Price says, HMO members who complain don't realize that companies have to hold costs down to prosper. Suits filed against HMOs about care often are "meritless and ludicrous," he says. "If they want to receive more benefits, they are going to have to be willing to pay for them. If you pay for a Chevrolet, you don't expect to receive a Mercedes."

Although much of the controversy has focused on FHP, which operates one of the biggest senior-care programs in the country, health-care experts contend that the company's practices are symptomatic of wider problems in senior care. All HMOs have to juggle costs and premiums to make money. In Los Angeles County, for instance, the federal government will pay an HMO $530 a month for each of its senior members. That's roughly 95% of what Washington figures it would pay through traditional Medicare and far more than the monthly $110 the average HMO member pays. The higher premium reflects the elderly's need for more care. But it also promises big profit margins for HMOs that can keep their costs down, health-care experts contend.

MARBLE BUILDINGS. Recent studies suggest that seniors obtain better care through traditional Medicare than by using HMOs. A February, 1994, study of 1,632 cases by the Center for Health Policy Research in Denver funded by the Health Care Financing Administration (HCFA)—the HHS division that oversees federal health programs for the elderly—found that seniors who depended on Medicare to pay their doctor bills received superior home care to those using an HMO. "FHP is not inherently evil," says Stewart Grable, a member of the Pima Council on Aging, an Arizona nonprofit group that works with the elderly. "The evil is in the system, and I don't see FHP trying to head off the problems."

Founded in 1961, when HMOs were virtually unheard of, FHP is a pioneer in the managed-health-care industry. It started with a suite of medical offices on a 16-acre lima-bean field in then-rural Orange County. Today, the landscaped FHP campus houses a gleaming monument to the HMO ideal: a series of sparkling marble-floored buildings that offer an array of medical services, from neonatal care to its own pharmacy. Under the tutelage of Price, 54, a 13-year FHP veteran and CEO since 1990, the company has grown enormously. Last year, Mark B. Hacken, 58, a former drug chain executive, was named co-CEO to manage the expansion of FHP's pharmacy business. FHP now employs 800 of its own doctors and contracts with 13,000 others to treat members in 11 states, with its biggest markets in California, Colorado, and Arizona.

Much of FHP's recent success has to do with its pursuit of the lucrative senior

TROUBLING SYMPTOMS AT FHP

1988 Health Care Financing Administration alleges numerous marketing violations by FHP sales staff, including misleading seniors about coverage and choice of doctors. Without admitting wrongdoing, FHP submits a plan to correct problems and agrees to bimonthly meetings with HCFA auditors.

1990 A survey conducted by an employee-benefits firm for the California Public Employees Retirement System ranks FHP last among 10 large managed-care companies. The survey measured quality control, member services, and methods for choosing doctors, among other criteria.

1991 The HCFA launches a new investigation into FHP's Medicare plan after level of complaints about FHP's sales tactics doubles from 1990. Without admitting wrongdoing, FHP agrees to overhaul marketing methods.

1993 Center for Medicare Advocacy in Tucson files a class action against the Health & Human Services Dept., charging that it failed to enforce regulations governing Medicare HMOs. Eight of 15 named plaintiffs are members of FHP's senior plan. Charges range from denying home health care to terminating care with no warning to failure to notify members of their right to appeal decisions. FHP won't comment.

DATA: BUSINESS WEEK

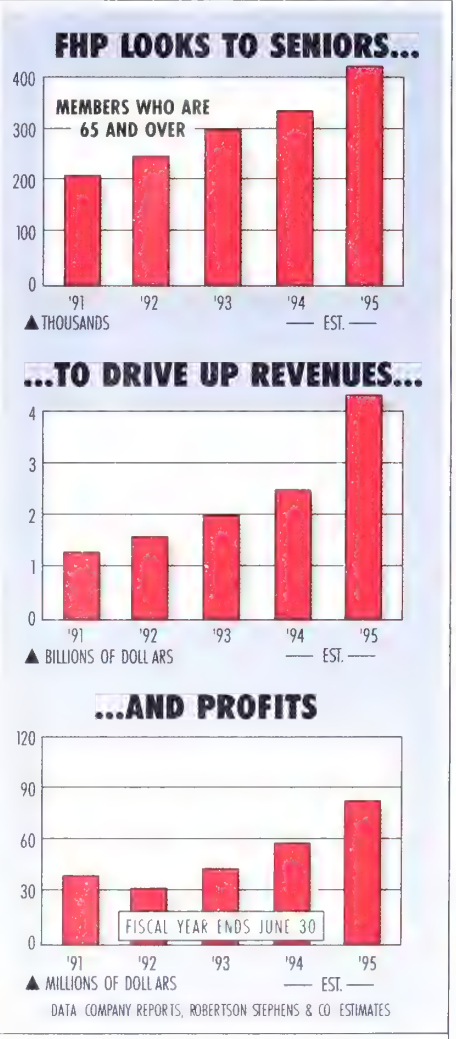
market. Seniors account for just 35% of the HMO's members but fully 60% of its $2 billion in revenues. Through the TakeCare acquisition, FHP hopes to bolster its position in the elder-care market. FHP already has 326,000 Medicare members. And TakeCare could add 70,000 more seniors by 1996, according to analyst Thomas Hodapp of Robertson Stephens & Co. That would give it the clear lead over other for-profit HMOs that are aggressively chasing the market. After the acquisition, Hodapp estimates FHP's earnings could grow 43% in 1995, to $82 million, as its revenues climb 72%, to $4.3 billion (charts).

And FHP's target market is just beginning to take off. Peter Boland, a Berkeley (Calif.) health-care consultant, estimates that less than 10% of the country's seniors have joined an HMO. But that's changing as seniors increasingly warm to the plans. By signing up with FHP, seniors are able to enjoy such additional benefits as prescription-drug programs not offered under Medicare. And as HMO members, they don't have to buy additional insurance to supplement their Medicare coverage. FHP estimates that by joining, seniors save about $1,200 annually in out-of-pocket expenses. "There's a lot of gold in this population," Boland says.

FREE MEALS. Previous FHP efforts to tap this potentially rich vein have run afoul of regulators. HCFA criticized FHP in 1988 and again in 1991 for allegedly misleading potential customers about its senior plan. Among the problems: Regulators said that FHP salespeople were telling seniors, falsely, that they could continue to use their own physicians. Not surprisingly, many seniors became disenchanted with FHP. A study released last year by the Center for Health Care Rights found that in 1991, 20,000 seniors dropped their FHP plans. Without new enrollments, FHP's membership would have declined 17% in 1991, the study says. That was double the withdrawal rate at PacifiCare Health Systems Inc., FHP's biggest competitor. FHP claims its disenrollment rate is now down to 1.4%

At the time, FHP attributed its marketing problems to overzealous sales representatives. Without acknowledging any wrongdoing, FHP agreed to suspend its marketing efforts for six months in 1991 while it revamped its sales practices. Among the changes: FHP said sales representatives would lose commissions if seniors leave the plan in fewer than 120 days. The company also tied bonuses to low cancellation rates. Nowadays, Price also says that new members receive mandatory follow-up phone calls to explain their plans in detail. "We stubbed our toe and learned," he says.

Maybe so. But FHP remains an energetic marketer. Like other HMOs, it spends heavily on radio and TV ads to attract seniors to its programs. And throughout Southern California, FHP sponsors "senior days" in parks and other public places, handing out small gifts and free meals at FHP booths. Price defends his company's right to market aggressively because of the highly competitive nature of the market. HCFA also says it can find nothing wrong with FHP's current marketing practices.



Still, it's the quality of care delivered by FHP that most concerns health-care experts and physicians. Take Beatrice Bennett, who was recuperating from a stroke in a Tucson hospital for two weeks in November, 1992, when her daughter, Sharon, was suddenly told that her mother would be discharged, according to the class action filed in November. Sharon persuaded FHP to transfer her mother to a nursing home. In January, that coverage was also halted, the suit alleges. Bennett eventually qualified for state aid, but not before depleting $65,000 in s- ings. "It's too late to do anything for y mom," says Sharon Bennett. "FHP is v- ing to take advantage of a system t doesn't function." FHP won't comment the Bennett case.

Some physicians also allege that I isn't afraid to overrule their health-c recommendations to restrain costs. Tucson cardiologist who severed his r tionship with FHP in 1992, says the c pany would often deny cardiac-rehabil- tion procedures, such as exercise a diet classes after surgery, which guaranteed Medicare benefits.

LITTLE PRESSURE. Another Tucson ph- cian, who worked at an FHP facility u last year, claims the company also lim the use of pricey drugs. He says it d couraged doctors from prescribing Proz Instead, it recommended a cheaper a- depressant, Elavil. Although HMOs ne- tiate different prices for drugs, Ela typically costs about one-tenth the pr of Prozac, says Jerrold Rosenbaum pharmacologist at Harvard Medi School. Elavil is widely considered in medical community to pose more ris for the elderly. Among the possible s effects: confusion, sleepiness, and card problems. "There's a tendency to think yourself, well, the patient will proba be O.K., even though you know you not prescribing the right drug," says Tucson physician. Price denies that F interferes with doctors' decisions on ca including cardiac rehabilitation. And insists that FHP doesn't discourage use of any drugs because of costs.

So far, critics say FHP is under lit pressure to change. HCFA, for one, is seeking major reform. It says it receiv only 4,125 complaints about care fr members of all senior HMO plans in 19 That's less than 1% of all Medicare H beneficiaries and far fewer than t number of complaints recorded under t ditional Medicare insurance. But heal care advocates say that low rate und scores their argument that seniors are familiar with the appeals process a aren't sure what kind of care they are titled to.

And managed-care experts, includi those at HCFA, admit that the HMO dustry has been slow to develop qual measures. "We have not moved aggr sively in quality measurements in t HMO arena," concedes Dr. Rodney Armstead, director of HCFA's Office Managed Care. HCFA is now working w HMOs to develop tighter quality contr Until it does, the friction over FHP's pr tices is likely to remain—even as t company continues to grow.

By Eric Schine in Fountain Vall Calif.

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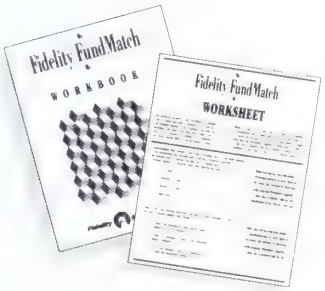

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INFORMATION HIGHWAYMEN

They prey on investors who bet on the next technological boom

Last fall, postal worker Jack Lawrence watched with keen interest a television infomercial about investing in the "communications technology of the future." After calling an 800 number and receiving a packet on specialized mobile radio (SMR), which is used by taxis and trucking companies, he got a call from a Comcoa Ltd. salesman who made him the proverbial offer he could not refuse. For just $7,000 each, he was told, Comcoa would obtain SMR licenses for him from the Federal Communications Commission. That, said the salesman, would allow him to earn $8,400 annually per license by leasing the licenses to communications companies interested in setting up networks.

Over about three months, Lawrence transferred $98,000—his life's savings—to Comcoa. Eight of the 14 licenses he received appear to be virtually worthless because he has been unable to find buyers. Meanwhile the Securities & Exchange Commission charged Comcoa, based in Boca Raton, Fla., and its founder, Thomas Berger, 41, with fraud and selling licenses that the SEC considers unregistered securities.

Lawrence is just one of the many recent victims of information-highway robbery. For years, scamsters have seized on hot trends to peddle such risky investments as oil and gas leases and raw land to often naive investors. Now, boiler-room operators are popping up all over the country—from Boca Raton to Plano, Tex., to San Diego—to exploit burgeoning interest in info-highway technologies. Investors are often told they can earn returns of as much as 400% on their investment—usually a minimum of $5,000—in three to four years. In some cases, investors do come out with a profit. But authorities claim that there are many more losers than winners, for promoters all too often engage in such ploys as inflating estimates of potential returns and charging outrageous fees.

Although pitches vary widely, most focus on two quite legitimate technologies: SMR, a communications system that could rival cellular phones, and wireless cable television, in which TV signals are sent by microwave to special antennas. Wireless cable is a low-cost competitor to the $22 billion wired-cable industry. "These scams follow the headlines," says G. William McDonald, enforcement chief for California's Corporations Dept., which lately has spearheaded raids on the state's boiler-room operations. "There's so much out there about the prospects for the information superhighway that investors think they can't lose money."

> Promoters all too often inflate estimates of potential returns and charge outrageous fees

STEPPED-UP CRACKDOWNS. That's wishful thinking. Federal and state regulators believe dozens of wireless cable and SMR promoters have illegally raised at least $200 million from thousands of investors nationwide. In recent months, they have stepped up crackdowns on the operations. The National White Collar Crime Center in Richmond, Va., estimates that since mid-1992 at least 15 states have ordered some 67 companies to halt sales of these investments. Within the last year, the SEC and the Federal Trade Commission have filed about a dozen cases.

Promoters of SMR deals usually charge investors thousands of dollars in front money to help them obtain SMR licenses and later solicit more money to build the systems. In May, the SEC accused Comcoa and Berger, who was previously convicted of interstate transportation of slot machines, of promising to file applications and help lease licenses for $7,000 each. In fact, filing for an SMR license usually runs about $200, not including any additional services.

According to court documents, Co

raked in upwards of $16 million. It half the money was spent on commissions, and a court-appointed ver is investigating what happened ie remainder. Comcoa denies that ade any promises to lease licenses, g that it was merely filing applica-, not selling securities, and was fore not subject to SEC jurisdiction. ever, in early June, a federal judge, anting a preliminary injunction, re-d Comcoa's claims and called Ber- testimony "incredible." Comcoa has shut down, and a court-appointed ver is negotiating to sell licenses by its 1,500 customers.

NGDOING DENIED. Another ques-ble SMR enterprise is New York-d Metropolitan Communications ., which the FTC has alleged used ading sales practices to bilk inves-out of $28 million from the sale of licenses. Operating out of 30 boil-ooms, Metropolitan promised to SMR systems but rarely delivered, TC claimed. A Metropolitan affiliate unable technically or financially to hese licenses together," says FTC at-ey Stephen Gurwitz. In January, FTC shut down Metropolitan. Nei-the company nor its attorney could eached for any comment. In court rs, company President Donald Jack-and other defendants denied any igdoing.

ne of Metropolitan's alleged victims dy Brown of Fort Worth, who used it cards and a life-insurance policy to ow most of the $28,000 she used to four licenses. While her mother, bought two licenses, made a nice it from the sale of one, Brown fears and other investors "are still going e losers." A receiver is negotiating legitimate operators to sell the li-es held by Metropolitan's custom-

The FTC's Gurwitz, while eding that some licenses e been sold for a profit, says in the Metropolitan case, "I k there will be substantial es. Certainly the investment misrepresented as an in-e-producing asset."

romoters of wireless cable a different pitch. They gen-y solicit what the SEC consid-to be stock investments by ng prospective buyers that wireless cable company they promoting already has an license but needs money to d a transmission tower and up subscribers and cable nels. According to the SEC, on Communications Inc., based in Newport Beach, Calif., promised a 400% return to buyers of shares in Wilkes-Barre-Scranton, which was supposedly developing a wireless cable system in those Pennsylvania cities.

Vision allegedly told investors that it owned licenses for 20 channels in that market. In fact, the FCC has licensed only 12 channels there, the SEC says. What Vision actually owned was only a right to take over the lease on 20 channels, including several unlicensed educational channels, says SEC attorney Judith R. Starr. Without those licenses in hand, investors couldn't possibly have made the kind of returns Vision promised, she says. "They had the rudiments of something there, but there was still a long row to hoe before they got to 400% returns."

In May, a federal judge ordered Vision liquidated after an SEC complaint charged the company, its principals—William L. Clemens Jr. and Michael Imbesi—and others with securities fraud and making false and misleading statements. The company, Clemens, and Imbesi neither admitted nor denied wrongdoing, but as part of a consent decree, Clemens and Imbesi will return to investors $550,000 they allegedly pocketed from the $4 million Vision raised for the project. It's not clear, however, how much money investors will eventually recoup. Says Vision attorney Howard Schiffman: "Vision entered into the settlement because it believed the settlement was the best opportunity for investors to recoup their investment."

Even with licenses in hand, making the kind of killing some wireless cable promoters promised investors is highly unlikely, regulators say. The big payoff is supposed to come within three to four years, after a viable subscriber base has been built and a communications giant such as Tele-Communications Inc. pays top dollar to take it over. But that's a risky bet, authorities say, because few of these systems have actually gone on the air. And those that have are struggling with small audiences and big expenses.

One reason, regulators say, is that most of the money raised goes to pay sales commissions and related expenses, leaving little for actual operations. Although the companies often disclose these costs, they typically

CRACKDOWNS

Company/Location	Amount raised	Charges
WIRELESS CABLE TV		
CONTINENTAL WIRELESS CABLE TELEVISION San Diego, Calif.	$34.1 million from 2,000 investors for systems in New Orleans and Nashville	**MAY '94** SEC accuses top execs of defrauding investors of as much as $27.3 million
PARKERSBURG WIRELESS LIMITED LIABILITY Las Vegas, Nev.	$10.3 million from 740 investors for franchise in Parkersburg, W.Va.	**MAY '94** SEC accuses company of making "false and misleading statements"; assets frozen; case pending
VISION COMMUNICATIONS Newport Beach, Calif.	$4 million from 300 investors for systems in Wilkes-Barre and Scranton, Pa.	**MAR. '94** SEC accuses company of selling unregistered securities and misrepresenting investment
SPECIALIZED MOBILE RADIO		
METROPOLITAN COMMUNICATIONS New York, N.Y.	About $28 million from 2,500 investors	**JAN. '94** FTC accuses company of deceptive trade practices
COMCOA Boca Raton, Fla.	About $16 million from 1,500 investors	**MAY '94** SEC accuses company of securities violations

DATA: SECURITIES & EXCHANGE COMMISSION, FEDERAL TRADE COMMISSION

TIM? JUDY BROWN OF TEXAS NT $28,000 FOR LICENSES SHE ES ARE WORTHLESS

REID HORN

fail to point out the impact on the business of these expenses.

A good example is San Diego-based Continental Wireless Cable Television Inc., whose assets were frozen in May by a federal court after the SEC charged the company and its top executives with defrauding investors of as much as $27.3 million. The suit alleges that the company told its 2,000 investors that their money would be used to develop wireless systems in Nashville and New Orleans. The SEC claims that only $6.8 million of the $34.1 million Continental raised was actually used to build the systems. According to SEC attorney Karen L. Matteson, at least $15 million went toward paying sales commissions and other expenses and another $11.7 million is unaccounted for. Investors also unwittingly underwrote $1.7 million in personal loans to Continental's top executives—Robin J. McPherson, Jay R. Bishop, and Gene R. Cardenaz, she says.

UP AND RUNNING. McPherson, Continental's president, denies the SEC's charges against Continental and says that the company was entitled to any money it received from investors. "As long as we fulfilled all of our obligations, what we spend the money on is our business," he says. A July 12 hearing is scheduled on the SEC's motion for a preliminary injunction against Continental to bar future violations of the securities laws. To Continental's credit, its Nashville Wireless Cable Television Inc. is up and running, with nearly 2,200 subscribers. But it is still too early to tell what profits, if any, investors

Although a few investors have co out ahead, others rushing to cash in the info highway may not be so luc After wireless cable and SMR run th course, enforcement authorities pred scam artists are sure to start pitch new generations of wireless techn gies, such as long-awaited personal c munications services, a mobile syst for voice, paging, and transmitting d

Meanwhile Lawrence, the Comcoa vestor, is keeping his fingers crossed his big gamble on SMR. "I'm h ing... [the licenses] will put me in blue, because right now I'm in the re he says. The odds are against him.

By Stephanie Anderson Forest in D las and Gail DeGeorge in Miami

Commentary/by Kelley Holland

MUNI-BOND DEALERS JUST DON'T GET IT

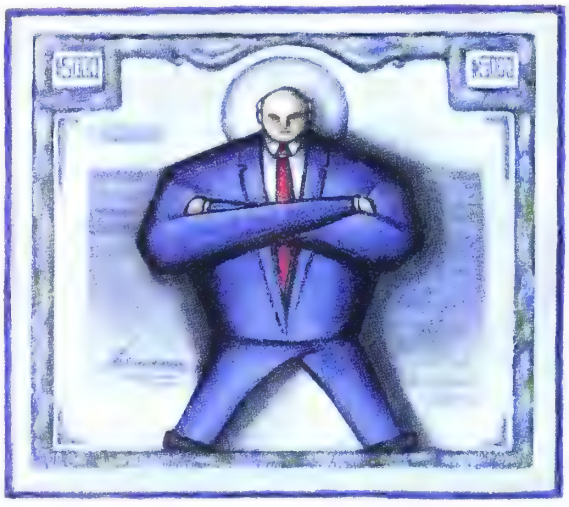
The $1.2 trillion municipal-bond market was battered by an embarrassing series of scandals last year. Thus, it's no surprise that the Securities & Exchange Commission is proposing reforms to make the market fairer and easier to monitor—and especially to make more information available to the millions of individual muni investors.

Unfortunately, muni dealers are unchastened. In conferences and seminars around the country, they are raising loud objections. In fact, they sound a lot like feudal lords striving to hold on to their fiefdoms as society modernizes around them.

FLYING BLIND. Many dealers, for example, are taking issue with an SEC proposal that would require them to review an issuer's disclosure documents before recommending bonds to investors in the secondary market. Muni dealers mutter darkly that this will be so time-consuming that they won't be able to recommend many bonds. And that, they claim, will cause trading in the less active issues to dry up.

Excuse me? The National Association of Securities Dealers has long required brokers selling securities, including munis, to have a reasonable basis for recommending them. Many muni dealers, though, have been using loopholes to get around this rule for unrated and thinly traded bonds. By what tortured logic can dealers defend pitching bonds they barely know?

To be sure, there is as yet no central repository for disclosures. It may make sense to delay implementation of the reform until such a facility is up and running. Still, the proposal itself is eminently reasonable. "Disclosure is so poor that I think you need this special



requirement for municipals," says Richard Lehmann, president of the Bond Investors Assn. in Miami Lakes, Fla.

Dealers also object to an SEC proposal to require them to disclose markups on so-called riskless transactions—where both buyer and seller are identified before a dealer's trades take place. "What's the next step? Where are they going with this?" says R. Fenn Putman, chairman of the Public Securities Ass "There isn't a truly riskless transactio in volatile markets. Dealers say thes trades sometimes leave them expose to changing prices, and disclosing mar ups will lead investors to focus on dea ers' profits rather than on the intrins value of what they're buying.

Again, the dealers' objections ar out of line. Requiring disclosur in any business often deters abu es, and the muni market is r exception. "I don't see any reas at all" for their being upset, say SEC Commissioner Richard Roberts. "I don't understand th opposition to the markup [rule]

A few dealers, along with som money-hungry politicians, are als trying to circumvent an industr group's ban on political contrib tions aimed at winning underwri ing business. They are trying t lure lawyers and others doin business with muni issuers to a as stand-ins and make gifts o their behalf. The industry need to get serious in putting a re stop to "pay-to-play" giving.

With its antiquated rules and limite flow of information, the muni marke badly needs reform. The SEC's prop sals are a good start. Dealers will onl hurt themselves if they try to hol back long-overdue progress.

Holland, BUSINESS WEEK's bankin editor, writes frequently about municip bonds.

ASDAQ WITH EUROPEAN ACCENT?

nurture small business, the EU ponders a new stock exchange

ERS HOPES TO HAVE PLANS FOR A CONTINENTAL EXCHANGE READY BY WINTER

Mark I'Anson, founder of Integrated Micro Products in the town of Consett in northern land, knew exactly where he wanted ist his fast-growing computer compawhen he decided to go public this . He shunned both the London Stock hange and its over-the-counter offng, the Unlisted Securities Market M). Instead, he opted to list on NAS-, the traditional market for U. S. wth companies.

MP, which makes computers that pro- call-waiting services, raised $16 mil- in a March issue of American depos- y receipts, and I'Anson, 39, couldn't happier. "NASDAQ and the U. S. in- tment community just understand sort of company better" than closer- ome alternatives, he says. "The Lon- Stock Exchange doesn't have any a what the needs of smaller compa- s are." So disillusioned e small European com- ies become with costly l inefficient local mar- s that about 50 others e taken the same te across the Atlantic ble).

WEAKNESS. The flight equity issuers points a major flaw in Eu- e's single economic rket: the absence of an anized capital market emerging companies. ny European govern- ments feel that the lack of such a market is a key weakness of the European Union. Starved for capital, many small companies fail. That stifles job creation and makes Europe less competitive in computers, electronics, telecommunications, and other high-tech industries. "In Europe, we have virtually missed out on the whole [small-company] sector," says Joseph B. Peeters, managing director of Dutch-based Capricorn Venture Partners.

NASDAQ, which opened its London office in 1987 and has since doubled staff to 10, is pushing hard to sign up European companies. Ellen Hipschman, NASDAQ's international marketing director, says there's "a high level of interest" in listing—and that includes Eastern European companies. But NASDAQ officials in the U. S. note that they're not trying to woo companies away from European stock markets but only attempting to get a company's U. S. listing.

Top EU officials, some national stock exchanges, and venture capitalists are trying to put together a Europewide stock market for growth companies. With backing from the EU, Peeters hopes to draft a proposal by July and to have a final plan ready by November. He estimates that 3,000 to 5,000 of the 15,000 venture-backed companies in Europe, with $5 billion in capital behind them, are candidates for listing. "Anything that helps the expansion of small companies, which are big employers, is important in helping to solve Europe's high unemployment problem," says one EU official.

Some European bourses, principally those in France, Spain, and Denmark, support the idea. The Paris Bourse sees such an exchange as part of a solution to the problems of its second-tier and over-the-counter markets. Both have been battered by recession and are suffering from the same lack of interest from investors and brokers as London's USM. "We are very keen that [the new exchange] should have a strong European dimension," says Dominique Le Blanc, deputy general manager of the Paris Bourse. The Barcelona Stock Exchange and the Copenhagen Stock Exchange are also interested in a Europewide small-company market.

HALFWAY HOUSE. But creating a Euro-NASDAQ isn't so easy. Peeters must knit together the interests of Europe's venture capitalists, investment bankers, and fund managers, plus accommodate the wishes of interested stock exchanges.

Consider what happened to the largest of the existing secondary markets, USM, which the LSE plans to close by 1996. The exchange created the USM in 1980 as a halfway house for small companies that couldn't meet the strict requirements, such as a market capitalization of at least $1 million, for a big-board listing. In 1989, the USM was a booming market, with 420 quoted companies and a total market capitalization of $13.5 billion. But recession, neglect by LSE officials, and loose oversight and listing requirements caused brokers and investors to lose interest.

Today, the USM has about 250 companies and a market capitalization of just $9 billion. The EU will have to ponder the lesson in London's disappointment as it figures out how to renew interest in small-company investing—and keep more listings from crossing the Atlantic.

By Richard Evans, with Paula Dwyer, in London

NASDAQ IS LURING EUROPEAN COMPANIES

Company/Country	Industry	Price per share*
DANKA BUSINESS SYSTEMS (Britain)	Office equipment	$44.75
ETHICAL HOLDINGS (Britain)	Pharmaceuticals	7.25
FUTUREMEDIA (Britain)	Training programs	5.25
INTEGRATED MICRO PRODUCTS (Britain)	Phone systems	6.75
OLICOM (Denmark)	Computer networking	9.50
FUEL-TECH (Netherlands)	Pollution control	10.25
HEIDEMIJ (Netherlands)	Engineering	10.75
PETROLEUM GEO-SERVICES (Norway)	Seismic data	13.63

*June 14

DATA: NASDAQ INTERNATIONAL LTD., BLOOMBERG FINANCIAL MARKETS

GARY MATOSO/CONTACT

A REIT PLAY THAT'S LESS LIKELY TO GO WRONG

Money is moving into real estate mutual funds, where the pros do the picking

For the past few years, the hottest investment in the real estate market has been the real estate investment trust (REIT). But sifting among the piles of REIT offerings flooding onto the scene is becoming a daunting and sometimes dangerous task. Now, though, investors have a rapidly expanding group of real estate mutual funds that want to do the job for them. By culling through REITs to identify the good, the bad, and the ugly, the funds may well become property investors' new darlings.

It's easy to see the appeal of the funds. While the Standard & Poor's 500-stock index had a total return (appreciation plus reinvested dividends and capital gains) of −0.55% as of June 9, the average real estate mutual tracked by Lipper Analytical Services Inc. was up more than 2%. During that period, two veteran funds, the $354 million Cohen & Steers Realty Fund and the $130 million PRA Real Estate Securities Fund, were among the top 30 of the 1,500 or so equity funds, up 9.81% and 9.03%, respectively.

Real estate funds have a big edge over another property investment, the limited partnership, or LP, now being offered by some Wall Street houses. LPs are structured to last for five years or longer, so selling early can mean taking a big loss. Fundholders, though, can redeem shares easily at net asset value. And even REITs, since they are traded on the exchanges, are liquid investments.

MAINSTREAM PLAY. Fund managers warn that even if real estate keeps improving, individuals could stumble badly by picking the wrong REIT. "In an industry that's tripling every year and a half, it's a loser's game for individuals to pick their own stocks," says PRA Real Estate Fund's Dean Sotter.

The supply of REITs has mushroomed, with their market capitalization rising from $16 billion in 1992 to $40 billion today. And analyzing the complex prospectuses of many REITs hasn't gotten any easier. Not only do investors have to choose a REIT that focuses on the property type with the best prospects—apartments, hotels, malls, and so on—but investors must assess the economics of areas where properties are located. And analysts complain there's often not enough disclosure in REIT prospectuses to make fully informed decisions.

Fund managers say real estate is becoming a mainstream investment. "Five years ago, if you mentioned international investing, people would say that only the big guys do that, and now everyone is in international," says Jay Willoughby, manager of the new Crabbe Huson Real Estate Investment Fund. "We see the same situation in REITs." Willoughby's prediction may be a mite premature, but still, in just six months, the number of funds has doubled, from 6 to 12. And more are in the works.

The funds are attracting both big-name stock-pickers and new investors. CGM alty Fund, launched on May 18, is m aged by Ken Heebner, known for his s cessful $1.2 billion CGM Mutual Fund $497 million Capital Development Fu

Heebner says real estate is "a ma opportunity" today. While many gro stocks offer 1%-to-2% yields, "I can l REITs at a 7% yield or higher at the itial public offering," he says. "And I lieve the dividend will grow at 10% 20% a year." He seeks "undiscovered portunities" and owns many apartm REITs. Heebner has also picked u few hotel REITs, including leigh (N. C.)-based Winston tels Inc. A new area he's ploring: office REITs. He li Highwood Properties In which focuses on office bu ings in Raleigh-Durham, N

TRAILER CASH. Another n entrant is Franklin Real tate Securities Fund, wh has racked up an 11.6% turn since its January inc tion. Fund manager Matt A ery likes apartment REITs the Southeast and Southwe

Two other new contende Columbia Real Estate Fu and Retirement Planni Funds of America Inc.'s R Estate Securities Fund, ha different strategies. Columbi fund manager likes mobi home community REITs their stable cash flows. also likes California REITs, h ing to benefit from an econo ic upturn. While Columbi manager focuses on REITs, tirement Planning Funds America's Andrew A. Da widens his scope to inclu companies with real estate exposure su as banks, insurers, and even oil and g companies. He may buy an office RE IPO, Liberty Property Trust, based Malvern, Pa.

No one can predict which real esta mutual funds will lead the pack. B choosing among a dozen funds is f easier than sifting among the 210 (a counting) REITs on the market—and lot less risky.

By Suzanne Woolley in New Yo

A FLURRY OF NEW REAL ESTATE MUTUAL FUNDS

MAY 1994 CGM Realty Fund launched by well-known stock investor Ken Heebner to concentrate on "undiscovered" real estate securities. Heebner favors apartment, hotel, and office REITs.

APRIL 1994 Columbia Real Estate Equity Fund is 100% invested in REITs, preferring industrial and manufactured home community offerings.

APRIL 1994 Crabbe Huson Real Estate Investment Fund focuses on total return in its pursuit of "cheap, out-of-favor" REITs. Favorites: industrial and mall REITs.

JAN. 1994 Retirement Planning Funds of America's Real Estate Securities Fund owns mostly REITs but will also invest in banks, insurers, hotels, and oil and gas companies with real estate exposure.

JAN. 1994 Franklin Real Estate Securities Fund looks for REITs that can grow dividend yields 5% to 10% annually for the next few years.

DATA: BUSINESS WEEK

GENE G. MARCIAL

CABLE-TV DEAL AY SPARK UP OUSTON'S UTILITY

hares of Houston Industries, a diversified company that owns Houston Lighting & Power, have n on the skids this year. Among er concerns, the Street fears its ty dividend will be cut. But value yers are snapping up shares, betting t Houston is close to signing a deal its cable operations—probably with ne Warner. Such a pact, say these s, would surely rekindle the Street's lor for Houston.

The company announced in Novem- that it wanted to sell 50% of its Cable unit, which provides servic- o nearly 1 million subscribers in ifornia, Minnesota, Oregon, and Tex- Houston's other cable unit—KBL mmunications—owns a 50% stake in ragon Communications, which is also % held by Time Warner. Paragon s 900,000 customers in parts of sev- states, including upper Manhattan New York and Orange County in lifornia.

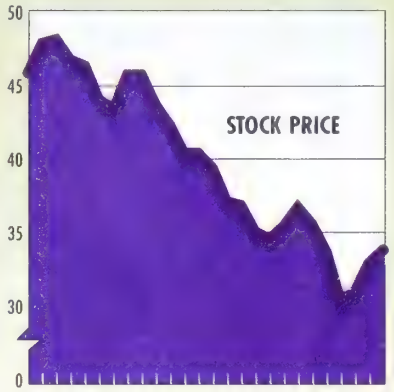
A New York money manager says uston executives have had lengthy ks with Time Warner, as well as th some of the regional Bells. He /s a deal to sell or merge KBL Cable th Paragon is the one Houston is ost likely to opt for. A Houston okesman says the company will deftely stay in cable TV but won't com- nt on the result of talks with pos- le "strategic partners." A Time rner spokesman declined comment .

ICLEAR DAMAGES. The money-losing L Cable is expected to break even or st a modest profit this year, after a 3 million loss last year on revenues $24 million. This pro puts the value 50% of KBL Cable at $1.5 billion. Dending on how the deal is formed—a le or a merger—the added value per are could be $7 to $10, says the mon- manager. So he figures the stock, w at 33, is worth at least 45. It trad- as high as 49 in 1993.

Doris Kelley, an analyst at Merrill nch, is convinced that "any cable siness sale, depending on its struc- re, could result in substantial en- ncement of Houston shareholder val- ." A sale could bring in cash to pay f debt and improve earnings. The alyst says the stock is under pressure because of regulatory concerns and problems arising from temporary outages in 1993 at its partially owned South Texas Project nuclear plant.

Without a deal, analysts expect Houston's earnings this year and next to be about the same as last year's $3.20 a share.

READY FOR A SURGE AT HOUSTON INDUSTRIES?



DATA: BLOOMBERG FINANCIAL MARKETS

BEAMING IN ON A LASER WIZARD

For a little company whose stock is selling at less than 2, Lasertechnics has mighty big friends: J. P. Morgan has taken a 23% stake, worth $5 million, in the Albuquerque maker of laser systems for imaging printers and product markers. And investment adviser James D. Wolfensohn Inc., headed by former Fed Chairman Paul Volcker, has acquired 20%. Government-owned Singapore Technologies Industrial is another believer: It invested $1 million, for nearly 5% of the stock.

Why such enormous faith in Lasertechnics? The company has yet to make a penny, although it posted sales of $8 million last year. "But we see revenues soaring to $16 million and the beginning of profitable operations by the end of 1994," says Richard Morgan, a general partner at Wolfensohn who has joined Lasertechnics' board.

Lasertechnics has two major businesses: Sandia Imaging System manufactures laser printers that produce photo-IDs and other cards coded with information the company says is tamper-proof and fraud-resistant. The second is a laser-coding business whose chief product is Blazer 6000, a pulsed-gas laser used in marking products and packages. It prints at faster than 1,800 marks a minute. Among the first to use Blazer 6000 was Anheuser-Busch, which has installed it in 13 breweries. The printers have found their way to China, where five units have been ordered to make IDs for schools and hospitals, says Morgan.

One Los Angeles money manager says the stock could triple in a year. One reason: Polaroid and Xerox may be interested in Lasertechnics. Sandia already has an alliance with Xerox to make a digital image recorder that accepts Xerox' new Verde film. "If Lasertechnics continues to click, Polaroid and Xerox may fight over the company," says this pro.

CEDAR HOPS ON THE CHENGDU EXPRESS

A subway in China? For New York's Cedar Group, the planned metro system is the route to sure success. Cedar's newly acquired division, Dominion Bridge, an old-line Montreal construction and engineering company, recently won initial contracts to design and build a subway for Chengdu, the capital of Sichuan, a province with 110 million people. For a company that has been in the red, Cedar will see "explosive earnings and revenues this year," says investment adviser Tom Fendrich.

He estimates Cedar will earn 30¢ a share this year on revenues of $170 million, and $1.50 next year on sales of $400 million. Fendrich believes that Cedar's stock, now trading at 5, will hit 12 to 15 by yearend. The recently signed letters of intent on $715 million worth of contracts in China "is very significant for Cedar," he says.

Plans call for building and operating a $50 million light-rail and subway system and an $80 million hydro-power storage station. Cedar also won an initial contract to build an $85 million, 50-kilometer expressway. The projects will be joint ventures between Dominion Bridge, which will own 70%, and the city and three state-owned corporations. Several Canadian agencies, including International Export Development Corp., will help finance the projects, scheduled to start in the fall. Fendrich says Cedar Chairman and CEO Michel Marengére is currently in Indonesia to negotiate $400 million contract.

ER. HOFMANN/BW

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Developments to Watch

BY OTIS PORT

OM THE GIANTS OF THE DEEP, A WEAPON TO FIGHT POLLUTION

There's good reason to save the whales: for their unique digestive machinery. In fact, A. Morrie Craig, a professor of veterinary medicine at Oregon State University, has discovered that the bacteria in the forestomach of whales show an amazing ability to break down toxic substances. That's why whales can scarf down a ton of krill a –polluted with oil, acids, and PCBs—without harm. If the s can be cultivated, says Craig, they could be a big help in ning up oil spills.

SU researchers are already testing cattle feed laced with eria from the stomachs of sheep and goats. These bugs n to detoxify the poison in tansy ragwort, a weed that kills million worth of cattle in Oregon every year. Similar eria promise to turn the carcinogenic compounds in TNT harmless chemicals. Pioneer Hi-Bred International Inc. is king on commercial products that exploit the bacteria.

IS TEST SHINES A SPOTLIGHT SPREADING PROSTATE CANCER

omputer tomography and magnetic resonance imaging often fail to detect the spread of prostate cancer. That s to unnecessary surgery, because once the cancer has ead beyond the prostate, the otherwise effective treatnt of surgically removing the gland has little benefit and ses undue stress. After metastasis, other measures are re-ed, such as radiation treatment.

Now, scientists at Columbia-Presbyterian Medical Center in v York have developed the first blood test that can detect metastasis of prostate tumors. An existing blood test, ed PSA, can screen for prostate cancer—but not its location. s new test, dubbed RT-PCR, detects prostate cells in the od—a sure sign that the cancer has spread. Aaron E. Katz, stant professor of urology, says the test is at least 80% ate, while MRI and CT fare no better than 60%. Abbott oratories and several other drug companies are interested ommercializing the method.

HORTCUTS FOR ILDING BETTER MOLECULES

andia National Laboratories is doing computer searches for new pharmaceuticals using software that was originally deoped to help arrays of telescopic video cameras detect inaing ballistic missiles. New York-based Sterling Winthrop ., the drug subsidiary of Eastman Kodak Co., is Sandia's tner. By sifting out promising compounds electronically, rling hopes to quickly home in on classes of molecules t merit lab experiments. That could slash the typical $50 lion cost of synthesizing and testing compounds for a new drug, says John Wendoloski, director for biophysics and computational chemistry at Sterling.

Sandia's contribution is a trick that quickly narrows complicated searches to a few promising candidates. When hunting for the best molecular shape to fit a particular protein, there are billions of possibilities. Trying them all could take decades, even with a supercomputer. So researchers at Sandia's Livermore (Calif.) lab are harnessing a so-called genetic algorithm that has been tuned to root out optimal solutions to complex problems. The work is still in its early stages. Under terms of their Cooperative Research & Development Agreement, Sterling will have exclusive use of the Sandia software for two years, after which it could be licensed to the public.

A BIOTECH TOOL FOR REPAIRING BLOOD CELLS?

The most important products to emerge from biotechnology so far have been so-called growth factors that spark growth of red and white blood cells. Products such as EPO, which helps an anemic body make red blood cells, and colony stimulating factor, which assists the body in restoring white blood cells, have boosted combined sales for Amgen Inc. and Immunex Corp. to $2 billion worldwide. Platelets—proteins that help blood form clots after an injury—are the third vital blood component. During high-dose chemotherapy or radiation, platelet counts drop so low that patients are in grave risk of dying from hemorrhage. For decades, scientists have been trying to isolate the substance that sparks platelet production.

In the June 16 *Nature*, Genentech Inc. in South San Francisco and ZymoGenetics Inc. in Seattle say they think they've found this long-missing factor. If so, it could open the door to the next billion-dollar bio-blockbuster. Other companies are in the race, but Genentech and ZymoGenetics have cloned and purified proteins dubbed "thrombopoietins," which in animals spur dramatic platelet growth. With all three drugs at a doctor's disposal, cancer patients could receive higher doses of drugs and radiation and stand a better chance of being cured.

OUR MICROSURGEON IS ENTERING THE COLON . . .

Cleo may be built with parts snagged from electronic toys and beepers, but this microrobot is no plaything. Someday it might offer surgeons a better alternative to unwieldy endoscopes for snipping polyps and making other repairs.

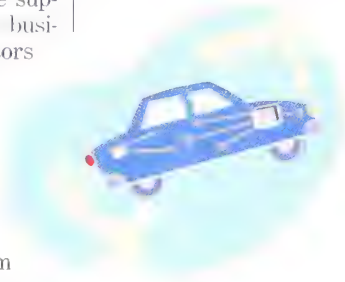
Built by James McLurkin, an engineering senior at Massachusetts Institute of Technology, Cleo is small enough to move through the colon and relay close-up pictures through an optical fiber to a surgeon. A thin control cable enables the surgeon to steer the robot to a polyp, cut the growth with a microscalpel, and suction away the debris. But McLurkin worries that he may not complete development if funds for his project, now provided by the Advanced Research Projects Agency, aren't renewed as a result of government cutbacks.

WHAT'S THE WORD IN THE LAB? COLLABORATE

With corporate R&D funds ever tighter, partnerships cut costs, spread risks, and seed ideas

Research and development are supposed to be the fun parts of business—the free-thinking sectors where ideas are born and nurtured inside wind tunnels, autoclaves, supercomputers, and test tubes. Lately, though, some of the joy has gone out of R&D. Just ask Charles F. Larson, executive director of the Industrial Research Institute Inc. in Washington. "I am frequently in touch with literally hundreds of research directors around the country," Larson said in an Apr. 6 speech to the American Association for the Advancement of Science, "and I can assure you that not many of them are enjoying their jobs very much these days."

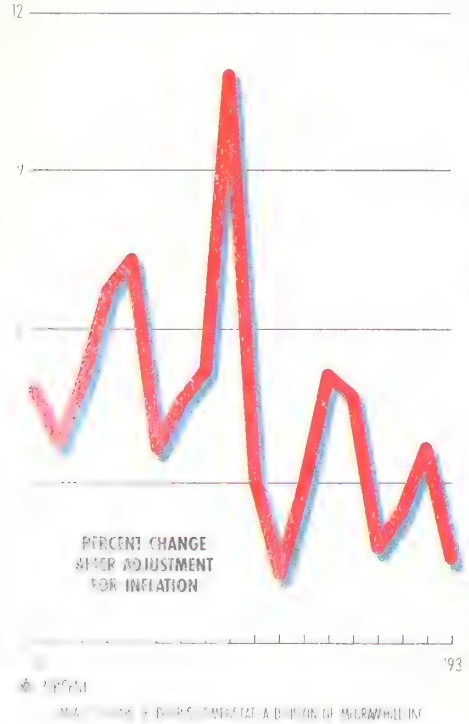
Worldwide, R&D managers are under pressure because their budgets are. According to Standard & Poor's Compustat, a division of McGraw-Hill Inc., last year's increase in R&D spending by 900 big U. S. companies was just 1.9% after inflation, the smallest rise since 1986 (chart). Hard-pressed IBM was a big factor: The increase would have been more than a percentage point higher if IBM, which cut R&D 13%, had not been included. Abroad, companies in Britain, Switzerland, and Sweden had strong growth in R&D. But the composite of non-U. S. companies—before inflation adjustment—actually underperformed the U. S. (table). Japan was especially weak with a 1% decrease in R&D outlays in the latest period for which results are available.



GM, FORD, AND CHRYSLER ARE "CARPOOLING" TO AVOID DUPLICATING R&D EFFORTS. PROJECTS INCLUDE ELECTRIC-CAR BATTERIES AND BETTER CRASH DUMMIES

The good news, though, is that R&D managers are learning to make do in their straitened circumstances. Continuing a trend that began in the late 1980s, they're ditching marginal projects; decentralizing R&D efforts; creating teams to squire product ideas from lab to market; and figuring out how to collaborate

R&D SPENDING RETREATS ONCE MORE



WHO'S LEADING...AND WHO'S FALLING BACK

	Nominal percent change 1992–93	1993 R&D spending Millions	As percent of sales	R&D per employee
SERVICE INDUSTRIES	15%	$205.8	1.0%	$1,141.1
HEALTH CARE	11	13,886.9	10.6	18,247.8
AUTOMOTIVE	8	13,441.4	4.0	8,975.9
ELECTRICAL & ELECTRONICS	8	8,504.5	5.5	7,060.7
TELECOMMUNICATIONS	7	4,240.6	3.7	7,149.1
CONSUMER PRODUCTS	7	2,322.9	1.5	2,294.7
CONTAINERS & PACKAGING	7	154.0	0.9	1,347.2
FOOD	6	640.8	0.8	1,390.8
MANUFACTURING	5	3,931.1	3.0	4,314.7
HOUSING	2	494.7	1.8	2,743.6
OFFICE EQUIPMENT & SERVICES	1	17,212.6	8.0	15,739.5
CONGLOMERATES	0	3,432.3	2.5	4,776.9
PAPER & FOREST PRODUCTS	0	440.6	1.1	2,051.7
CHEMICALS	–2	4,993.0	4.1	10,265.1
FUEL	–3	2,660.9	0.8	4,466.7
LEISURE TIME PRODUCTS	–3	1,891.5	5.4	8,087.1
AEROSPACE & DEFENSE	–7	4,210.4	4.2	6,470.8
METALS & MINING	–21	360.6	0.9	1,541.5
ALL-INDUSTRY COMPOSITE 1993	4	83,023.6	3.8	7,476.4
ALL-INDUSTRY COMPOSITE 1992	7	79,438.6	3.7	7,106.3

DATA STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC

R&D'S BIGGEST U.S. SPENDERS

BY TOTAL SPENDING

		1993 R&D expenses Millions
1	GENERAL MOTORS	$6,030
2	FORD MOTOR	5,021
3	IBM	4,431
4	AT&T	3,428
5	HEWLETT-PACKARD	1,761
6	BOEING	1,661
7	DIGITAL EQUIPMENT	1,530
8	MOTOROLA	1,521
9	EASTMAN KODAK	1,301
10	GENERAL ELECTRIC	1,297

BY SPENDING PER EMPLOYEE

		1993 R&D expenses Per employee
1	IMMUNEX	$535,607
2	BIOGEN	208,724
3	GENENTECH	117,594
4	GENETICS INSTITUTE	107,657
5	AMGEN	83,302
6	S3	80,132
7	CHIPS & TECHNOLOGIES	79,975
8	CYRIX	68,694
9	ADOBE SYSTEMS	64,932
10	CHIRON	64,263

AND IN RELATION TO SALES

		1993 R&D expenses As percent of sales
1	IMMUNEX	340.9%
2	GENETICS INSTITUTE	97.6
3	CHIRON	58.4
4	BIOGEN	58.1
5	GENENTECH	48.5
6	GENZYME	36.0
7	CONTINUUM	35.3
8	MacNEAL-SCHWENDLER	28.1
9	ENCORE COMPUTER	26.8
10	KNOWLEDGEWARE	25.3

DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC.

uitfully with outside experts, be they other companies, consortiums, universities, or government labs.

The results of these efficiency drives ıow up around the world, from Italy's ıat, which has replaced aca-ɜmically oriented "scientific ɔmmittees" with pragmat- "innovation committees," Canon Inc., which is ɛtting aside Japanese ɔide and eagerly seek-ıg collaborations with . S. companies that are ıore in tune with the In-ɔrmation Revolution. For &D, today's bottom line is ıe bottom line. Although lue-sky corporate R&D may enefit society as a whole, ɜw companies will shoul-er investments without lear payoffs for them-elves. And more is not ecessarily better. Just look t General Motors Corp. It ranks No. 1 n BUSINESS WEEK's latest global R&D coreboard. But it has steadily lost U. S. ıarket share despite massive invest-ıent in research and development.

3M COMBINED THE EXPERTISE FROM THREE INTERNAL DIVISIONS TO COME UP WITH ITS NEW NEVER RUST BRAND PLASTIC SOAP PADS

ıWESOME THREESOME. In the quest for ıore efficient R&D, the hottest trend is ollaboration. With technology getting ver more complex, no single company an do it all. Not IBM, Siemens, or Toshi-ıa—three of the world's largest elec-ronics companies—which are teaming ıp to develop 256-megabit memory hips. Not even hugely profitable Intel ɔorp., the world's biggest chipmaker. ntel's microprocessor dominance is be-ng challenged by the PowerPC chip, leveloped by the threesome of IBM, Mo-orola, and Apple Computer. On June ɜ, Intel struck back, announcing a ven-ure with Hewlett-Packard Co. to de-ɜlop a chip that will run a wide variety of machines, including personal computers, workstations, and file servers.

Collaboration is sweeping every field, in fact, from autos to aircraft to biotechnology. In Detroit, GM, Ford Motor, and Chrysler have formed 12 consortiums on such topics as electric-vehicle batteries, parts recycling, and better crash dummies. The idea is to avoid duplication by jointly performing basic, "precompetitive" R&D. One partnership's goal is to reduce today's more than 100 different wiring connectors to fewer than 10, which would be standard throughout the industry, lowering parts costs, reducing the difficulty of building cars, and making them easier to repair.

In biotech, ideas hatched in small companies often are nurtured by big partners. Case in point: An AIDS therapy from a tiny Quebec company, BioChem Pharma, that's being shepherded through clinical trials by Britain's Glaxo Holdings, will be marketed by yet another company, Burroughs Wellcome. The goal of such deals is to defray costs, spread risk, and promote the cross-fertilization of ideas.

One drawback is that collaborations are notoriously hard to manage. Turf battles and miscommunication, common enough within companies, can be magnified when separate companies try to cooperate. Mistrust can be fatal: It's why VM Motori, Europe's largest diesel-engine manufacturer, has steered clear of alliances. Indeed, VM Motori refuses even to patent its products for fear that its competitors will copy its knowhow.

Even where mistrust isn't an issue, R&D partnerships can fail if members decide linking up serves no vital need. The Advanced Computing Environment agreement, to create machines built on MIPS Technologies Inc.'s microprocessor design, quickly sank beneath the waves despite the nominal backing of everyone from Compaq Computer to Digital Equipment and Silicon Graphics. And Apple and Toshiba killed off their CD-ROM project—code-named Sweet Pea—before even producing a prototype.

The key is commitment. Says Yasutsugu Takeda, senior executive managing director at Hitachi Ltd.: "Get rid of the idea of 'strength in numbers.' You can't create something just because you sign up a lot of companies that are barely committed and don't have anything to bring." Takeda cites Hitachi's alliance with Texas Instruments Inc. on 256-megabit memory chips as a successful "meeting of equals."

HEWLETT-PACKARD AND CANON JOIN TO MAKE LASER PRINTERS. CANON PROVIDES PRINTER HEADS; HP, SOFTWARE AND MARKETING

The same goes for the partnership of Hewlett-Packard and Canon, which has a giant 70% of the world market for laser printers. Canon is in charge of the "engines," which spit ink onto the page; Hewlett-Packard handles software, microcontrollers, customer research, and marketing. The alliance has lasted even though Canon and HP compete fiercely in lower-priced ink-jet print-

HOW THE U.S. STACKS UP IN CORPORATE R&D GROWTH

Top R&D spenders among 200 companies	Nominal % change 1992–93	1993 spending Millions	As percent Sales	As percent Profits	Number of companies
BRITAIN	12.6%	$8,945	2.9%	33.5%	29
SWITZERLAND	12.2	5,672	6.5	80.9	10
SWEDEN	10.8	1,961	5.7	560.3	7
FRANCE	3.2	8,749	3.8	74.7	23
GERMANY	1.9	25,942	5.9	347.0	25
ITALY	1.7	3,663	4.2	–178.5	9
CANADA	0.7	2,297	5.4	–454.0	6
JAPAN	–1.0	37,574	5.3	152.1	75
THE NETHERLANDS	–3.1	3,805	2.8	45.4	6
NON-U.S. COMPOSITE	2.1	99,850	4.7	115.7	200
U.S. COMPOSITE	4.2	83,024	3.8	64.1	900

DATA GLOBAL VANTAGE (STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC.)

ers. HP's ability to handle such a relationship bodes well for its chances of working with hard-nosed Intel on new chips. To insulate their engineers from corporate politics, Intel and HP are likely to put them in a new company with its own board of directors—assuming, of course, that the deal clears antitrust review.

Collaborations don't have to be between companies. Some of the most successful are internal—between business units of large companies that are scarcely acquainted. In Germany, Daimler-Benz Chief Executive Edzard Reuter is hell-bent on turning his company into "an integrated high-tech" concern. In pursuit of synergy, Daimler's Mercedes unit is developing a fuel-cell-powered vehicle with the aid of space jocks from Daimler's Dornier and MBB aerospace units, as well as an outsider, Canada's Ballard Power Systems.

SUPERSCRUB. Similarly, 3M Corp. uses internal cooperation as the linchpin of one of the world's most admired innovation programs. Two years ago, 3M was getting 25% of its revenue from products developed within the previous five years. This year, it expects to improve that to 30% of revenue from products developed in the past four years. How? One example is lowly soap pads—a market 3M was never in. Consumer research showed that people disliked rusting steel-wool pads. So 3M brought together experts from its adhesives, abrasives, coatings, and nonwoven technologies divisions to create its Never Rust plastic soap pads. Over the past 18 months, Never Rust and its spin-off, Never Scratch, have captured some 30% of the U. S. soap-pad market.

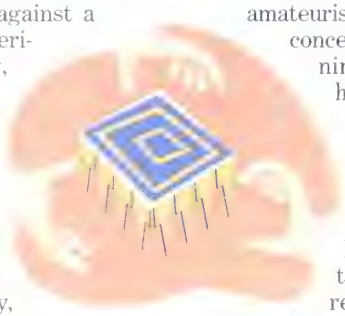
As companies focus more on 'D' and less on 'R,' many are looking to universities to perform research that once might have been done in-house. IBM, for example, has donated or discounted millions of dollars worth of computers and lab equipment to such schools as Cornell, Iowa State, and the University of North Carolina in return for access to work done by professors and graduate students. According to the Battelle Memorial Institute, a Columbus (Ohio) contract-research organization, U. S. companies will fund $1.6 billion in research at universities this year. And universities will account for 16% of all U. S. R&D spending, up from about 11% in 1985.

Corporations in other countries can't tap their local universities for ideas nearly as easily. Japanese universities are starved for research funding, for instance. And the great European universities, many of them centuries old, tend to be more insular than U. S. schools. In 1989, students at Italy's tradition-bound public universities staged a massive nationwide protest against a proposal for partial American-style private funding, fearing it was the beginning of a corporate takeover.

Haltingly, U. S. federal labs are trying to get a piece of industrial R&D, too. Bomb makers, such as Lawrence Livermore National Laboratory, are working with such machine-tool companies as Cincinnati Milacron Inc. Even the Air Force's Ballistic Missile Defense Organization—the group that almost brought you Star Wars—is trying to get in on the act by licensing high-tech spectroradiometers for checking tailpipe and smokestack emissions. But the national labs still tend to gold-plate their designs. Says Jules J. Duga, a senior policy analyst at Battelle: "NASA wants to send somebody to the moon. I just want to send somebody to Toledo."

Don't want to deal with the stresses and strains of R&D partnerships? Sometimes the best way to get a new idea is to buy it. Not glamorous, perhaps, but cost-effective. Japan companies have been ing it for years. "M technology that's de oped is not used. It on the shelf," says K neth Kovaly, presid of Technical Insig Inc., an Englew (N. J.) consulting fi "As much as 10% of y R&D budget should be cused on finding tech ogy outside your c company." If people s as Kovaly are heed the day may come w "not invented here" comes a matter of b get-minding pride, embarrassment.

BUSY, BUSY. As alwa the hardest part of R isn't coming up with ideas—it's pushing them through the ganization. At Siemens Corporate search in Princeton, N. J.—the U. S. for Germany's Siemens—George Drastal, group leader for knowled based systems, is slowly persuad managers in charge of industrial a medical-instrument units to try a n kind of "expert-system" software t helps technicians diagnose broken m chines. It's a slog, he says, beca amateurish systems have given concept a bad name. And w ning converts could harder as business-u leaders are more a more pressed by cor rate streamlining. "I erybody's busier th they've ever been," s Drastal. "It can be ha to get somebody just return a phone call."



SIEMENS, IBM, AND TOSHIBA, THREE ELECTRONICS GIANTS, ARE WORKING TOGETHER TO DEVELOP 256-MEGABIT MEMORY CHIPS

That's true in the la as well. With their unstr tured free time shrinki and the pressure for resu mounting, it's quite possi that R&D staffs will one d suffer a creativity short-c cuit. On the other ha R&D never was synonymous with R After all, Thomas A. Edison, the inve tor who won more than 1,000 paten used to work all through the night a kept a cot in the corner of his lab catnaps. And he's the one who first s that genius is 1% inspiration and 9 perspiration.

By Peter Coy in New York, with N Gross in Tokyo, Silvia Sansoni in Rom Kevin Kelly in Chicago, and bure reports

R&D SCOREBOARD

GLOSSARY

ITERIA: Data are for the most recent fiscal year reported as of May . If the company is not on a calendar-year basis, the number of the nth in which its fiscal year ends appears in parentheses following the mpany name. Companies included in the survey are limited to those orting sales of $75 million or more and R&D expenses of at least million.

R&D EXPENSES: Dollars spent on company-sponsored research and development for the most recent fiscal year, as reported to the Securities & Exchange Commission on Form 10-K. Excludes R&D under contract to others, such as U.S. government agencies.

R&D DOLLARS PER EMPLOYEE: R&D expenditures divided by the reported number of company employees.

PROFITS: Pretax income.

=not available; NM=not meaningful; NEG=negative earnings; NR=not ranked; *=includes customer or government sponsored R&D; **=includes engineering expense; †=R&D includes Hughes Electronics and EDS. DATA: STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC.

COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
INDUSTRY COMPOSITE		83023.8	4	7476.4		8801.6		2210803.0	3	198.6	3.8	129501.1	9	64.1
AEROSPACE & DEFENSE														
DUSTRY COMPOSITE		4210.4	-7	6470.8		4429.4		99501.3	-3	152.9	4.2	5415.7	3	77.7
ex	ABE	10.4	-10	3386.5	11	2766.6	12	451.0	-38	146.9	2.3	-38.8	NM	NEG
Aerospace (2)	BEAV	11.3	12	7542.7	5	NA	NR	198.0	13	132.2	5.7	18.8	96	60.0
eing	BA	1661.0	-10	13504.1	1	9068.2	2	25438.0	-16	206.8	6.5	1821.0	-19	91.2
rtiss-Wright	CW	1.4	-13	907.3	18	1038.6	17	158.9	-12	101.5	0.9	1.3	-96	106.8
nCorp (11)	GY	45.0	25	3383.5	12	2686.0	13	1905.0	-2	143.2	2.4	70.0	89	64.3
neral Dynamics	GD	33.0	3	1082.0	17	2797.9	11	3187.0	-1	104.5	1.0	413.0	33	8.0
& F Industries (3)		11.4	-19	7972.8	4	6838.2	4	277.1	-6	193.5	4.1	-21.2	NM	NEG
kheed	LK	449.0	7	5377.2	7	5768.8	6	13071.0	29	156.5	3.4	676.0	23	66.4
rtin Marietta	ML	280.1 *	40	3044.6	14	3203.7	10	9435.7	58	102.6	3.0	725.3	42	38.6
Donnell Douglas	MD	341.0	-33	4870.3	9	4951.7	8	14474.0	-17	206.7	2.4	459.0	-58	74.3
rthrop	NOC	97.0	4	3255.0	13	3461.2	9	5063.0	-9	169.9	1.9	170.0	-6	57.1
A (7)	OEA	3.7	3	4521.2	10	2020.5	14	94.2	7	114.2	4.0	23.7	2	15.8
bital Sciences	ORBI	10.8	80	9596.6	2	8591.4	3	190.2	9	169.4	5.7	6.4	17	169.2
cific Scientific	PSX	8.6	4	5375.1	8	4988.2	7	195.6	13	122.5	4.4	11.2	39	76.6
qua	SQA.A	17.2	-2	1674.7	16	1296.4	15	1697.0	-9	165.6	1.0	-64.0	NM	NEG
ndstrand	SNS	76.8	-3	8258.1	3	9235.3	1	1383.1	-7	148.7	5.6	133.3	21	57.6
okol (6)	TKC	15.7	11	1688.2	15	1108.1	16	1201.7	-8	129.2	1.3	101.7	0	15.4
ited Technologies	UTX	1137.0	-7	6743.8	6	5960.8	5	21081.0	-4	125.0	5.4	909.0	355	125.1
AUTOMOTIVE														
DUSTRY COMPOSITE		13441.4	8	8975.9		3506.6		336289.6	8	224.6	4.0	11690.4	NM	115.0
A) CARS & TRUCKS														
roup Composite		12412.3	9	10408.4		6292.2		295840.5	8	248.1	4.2	10264.1	NM	120.9
rysler	C	1230.0	17	9609.4	2	8051.1	2	42260.0	18	330.2	2.9	3838.0	311	32.0
rd Motor	F	5021.0	16	15582.9	1	11669.6	1	108448.0	8	336.6	4.6	4003.0	NM	125.4
eneral Motors †	GM	6029.9 **	2	8483.3	3	7588.5	3	135696.0	5	190.9	4.4	2575.3	NM	234.1
otor Coach Industries International	MCO	1.4	-37	4176	8	4176	8	400.4	16	1178	0.4	45.3	4	3.1
avistar International (10)	NAV	95.0	6	6979.1	4	6450.5	4	4694.0	21	344.8	2.0	-441.0	NM	NEG
shkosh Truck (9)	OTRKB	11.0 **	0	4980.9	5	5328.8	5	635.0	-1	288.6	1.7	7.9	-36	138.3
ccar	PCAR	22.0	5	1864.4	7	1826.2	7	3541.5	29	300.1	0.6	219.8	140	10.0
artan Motors	SPAR	2.0 **	26	3972.0	6	4305.7	6	165.6	34	331.2	1.2	15.8	15	12.6
B) PARTS & EQUIPMENT														
roup Composite		681.7	11	3353.4		2522.5		27021.9	12	132.9	2.5	325.2	-58	209.6
rg-Warner Automotive	BWA	25.2	-6	3812.4	7	3915.2	6	985.4	6	149.1	2.6	57.2	NM	44.1
eed Technologies (6)	BDT	9.6	43	5317.1	5	5409.1	3	156.1	70	86.5	6.1	25.8	414	37.1
arcor (11)	CLC	2.8	26	1369.5	16	988.4	18	225.3	19	109.3	1.3	27.1	7	10.4
mmins Engine	CUM	158.0	22	6694.9	2	5013.7	4	4247.9	13	180.0	3.7	205.0	168	77.1
ana	DCN	120.0 **	11	3333.3	10	2794.4	10	5587.5	12	155.2	2.1	244.3	324	49.1
etroit Diesel	DDC	58.3	10	11211.5	1	11211.5	1	1560.1	14	300.0	3.7	31.8	76	183.3
onaldson (7)	DCI	11.4	10	2670.1	11	2224.7	11	533.3	11	125.3	2.1	44.7	7	25.4
gle-Picher Industries (11)	EPIH	17.1	27	2590.9	12	2199.2	12	661.5	8	100.2	2.6	-1139.7	NM	NEG

R&D SCOREBOARD

COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFIT
Eaton	ETN	154.0	2	4052.6	6	3601.3	7	4401.0	7	115.8	3.5	262.0	45	58.8
Echlin (8)	ECH	18.4	21	991.5	19	757.1	20	1944.5	9	104.5	0.9	137.6	46	13.4
Excel Industries	EXC	7.9	43	2309.0	14	1643.5	14	515.7	21	150.5	1.5	20.2	236	39.1
Federal-Mogul	FMO	17.2	−6	1194.4	17	1235.0	16	1575.5	25	109.4	1.1	57.6	540	29.9
Modine Mfg. (3)	MODI	8.7	9	1618.0	15	1562.7	15	570.8	8	106.7	1.5	54.1	25	16.0
Moog (9)	MOG.A	16.1	−10	5711.0	4	4985.1	5	293.7	−4	104.0	5.5	8.6	NM	187.1
Raytech	RAY	4.3	−9	3639.4	8	3391.2	8	139.3	11	117.3	3.1	10.7	91	40.2
Schwitzer	SCZ	5.9	−16	5891.0	3	6416.4	2	124.1	13	124.1	4.7	3.5	NM	166.6
Simpson Industries	SMPS	1.6	8	890.8	21	599.6	22	262.5	18	148.5	0.6	16.3	16	9.7
Smith (A. O.)	SMC	7.6	17	703.7	22	680.7	21	1193.9	14	110.5	0.6	70.8	67	10.7
Standard Products (6)	SPD	21.0 **	54	2322.4	13	1675.1	13	763.8	16	84.6	2.7	50.2	30	41.8
Stant	STNT	2.5	13	1052.5	18	972.7	19	253.6	8	105.7	1.0	21.6	33	11.7
Superior Industries International	SUP	3.3	−18	952.0	20	1097.7	17	393.0	21	112.3	0.8	72.6	60	4.6
Wabash National	WNC	1.3	3	611.8	23	538.4	23	360.0	25	174.3	0.4	25.9	78	4.9
Walbro	WALB	9.5	5	3387.1	9	2900.1	9	273.5	13	97.7	3.5	17.1	0	55.3
(C) TIRE & RUBBER														
Group Composite		**347.4**	**−1**	**3416.3**		**3382.0**		**13427.2**	**−1**	**132.0**	**2.6**	**1101.1**	**15**	**31.6**
Bandag	BDG	12.3	−2	5278.9	1	4993.4	1	590.2	0	252.9	2.1	125.0	−4	9.9
Cooper Tire & Rubber	CTB	15.1	10	1985.0	3	1893.0	3	1193.6	2	156.9	1.3	164.3	−3	9.2
Goodyear Tire & Rubber	GT	320.0 **	−2	3487.6	2	3259.6	2	11643.4	1	126.9	2.7	811.9	24	39.4
3 CHEMICALS														
INDUSTRY COMPOSITE		**4993.0**	**−2**	**10265.1**		**6987.4**		**122139.3**	**0**	**251.1**	**4.1**	**7535.6**	**3**	**66.3**
Air Products & Chemicals (9)	APD	92.3	8	6557.7	28	5626.6	29	3327.7	3	236.4	2.8	300.8	−26	30.7
Arco Chemical	RCM	72.0	7	16000.0	5	15227.8	4	3192.0	3	709.3	2.3	311.0	−3	23.2
Betz Laboratories	BTL	28.7	1	6982.3	25	6480.3	24	684.9	−3	166.4	4.2	104.1	−22	27.6
Cabot (9)	CBT	45.7	22	8453.9	16	6930.8	22	1614.3	4	298.9	2.8	68.1	−42	67.0
Cambrex	CBM	5.8	44	7386.8	24	6310.1	25	197.2	10	249.3	3.0	13.4	30	43.6
CBI Industries	CBH	13.7	17	983.8	50	748.2	50	1670.3	0	120.0	0.8	−2.2	NM	NEG
Crompton & Knowles	CNK	11.2	11	4808.3	38	4550.4	37	558.3	8	240.0	2.0	82.5	21	13.6
Detrex	DTRX	2.5	3	6525.8	29	5474.4	30	105.1	9	270.8	2.4	−2.1	NM	NEG
Dexter	DEX	43.8	4	9319.8	14	7958.8	15	887.1	−7	188.7	4.9	66.4	−9	65.9
Dow Chemical	DOW	1256.0	−3	22671.5	1	18932.6	1	18060.0	−5	326.0	7.0	1525.0	75	82.4
DuPont	DD	1132.0	−11	9929.8	11	9875.3	10	32732.0	−2	287.1	3.5	958.0	−47	118.2
Eastman Chemical	EMN	174.0	7	9666.7	12	9666.7	11	3903.0	2	216.8	4.5	439.0	−9	39.6
Engelhard	EC	46.9	5	8156.5	18	6961.1	21	2148.9	−10	373.7	2.2	−4.7	NM	NEG
Ethyl	EY	75.6	2	13749.8	7	11911.5	7	1938.4	15	352.4	3.9	133.5	−35	56.6
Ferro	FOE	19.3	25	2917.5	46	2464.1	46	1065.7	−3	160.8	1.8	89.3	−9	21.7
First Mississippi (6)	FRM	5.3	31	4677.8	39	3647.4	39	429.9	−5	376.5	1.2	3.9	−85	135.4
Fuller (H. B.) (11)	FULL	21.8	7	3637.7	42	3193.4	43	975.3	3	162.5	2.2	40.9	−33	53.4
GH Holdings		23.7	1	5511.6	33	4617.9	35	1069.0	2	248.6	2.2	34.2	NM	69.4
Geon	GON	14.8	−8	7668.4	20	7442.7	17	982.8	1	509.2	1.5	9.9	NM	149.5
Goodrich (B. F.)	GR	67.9	0	5061.1	36	5432.8	31	1818.3	10	135.5	3.7	15.3	6	443.8
Grace (W. R.)	GRA	135.0	4	3970.6	40	3227.4	41	4408.4	2	129.7	3.1	221.2	15	61.0
Great Lakes Chemical	GLK	55.2	18	7878.9	19	6564.9	23	1792.0	20	256.0	3.1	415.0	15	13.3
Grow Group (6)	GRO	4.4	2	2196.5	47	2214.9	47	365.5	−2	182.7	1.2	18.1	27	24.3
Hercules	HPC	76.1	8	5405.2	34	4587.9	36	2773.4	−3	196.9	2.7	305.3	19	24.9
Indspec Chemical (3)		2.2	−4	5942.6	31	5736.3	28	98.5	12	269.1	2.2	0.7	NM	330.0
International Flavors & Fragrances	IFF	75.3	6	17221.5	4	14965.2	5	1188.6	6	271.9	6.3	323.8	15	23.3
International Specialty Products	ISP	21.2	0	8833.3	15	8172.7	13	548.3	−4	228.4	3.9	49.8	−42	42.6
Lawter International	LAW	4.4	8	8236.5	17	7988.1	14	172.2	3	320.8	2.6	29.5	−19	15.0
LeaRonal (2)	LRI	2.5	7	4976.0	37	4788.8	34	139.2	8	278.3	1.8	13.0	16	19.1
Loctite	LOC	26.7	2	6754.4	26	6063.2	27	612.6	1	155.0	4.4	91.0	−4	29.3
Lubrizol	LZ	88.5	−3	19184.9	3	16317.3	3	1525.5	−2	330.7	5.8	119.7	−32	74.0
MacDermid (3)	MACD	5.8	11	7576.5	21	7250.3	20	156.3	8	204.3	3.7	12.3	12	47.0
Minerals Technologies	MTX	16.1	12	7480.0	22	7276.2	19	428.3	9	199.2	3.8	43.6	27	36.9
Mississippi Chemical (6)		1.4	−16	1217.1	49	1186.5	49	386.4	15	327.8	0.4	−9.9	NM	NEG
Monsanto	MTC	626.0	−4	20853.5	2	17030.5	2	7902.0	2	263.2	7.9	729.0	NM	85.9
Morton International (6)	MII	68.6	12	5764.7	32	5340.5	32	2309.8	13	194.1	3.0	199.8	−14	34.3
Nalco Chemical	NLC	50.4	5	7409.6	23	7326.1	18	1389.4	1	204.3	3.6	249.8	5	20.2

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R&D SCOREBOARD

MPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	R&D EXPENSES CHANGE FROM 1992 %	R&D EXPENSES PER EMPLOYEE 1993 $	R&D EXPENSES PER EMPLOYEE 1993 RANK	R&D EXPENSES PER EMPLOYEE AVG. 1989-93 $	R&D EXPENSES PER EMPLOYEE AVG 1989-93 RANK	SALES 1993 $ MIL.	SALES CHANGE FROM 1992 %	SALES PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	PROFITS CHANGE FROM 1992 %	R&D AS % OF PROFITS
ndustries	NL	10 0	-9	3125.0	45	3093.1	44	805.3	-10	251.7	1.2	-69 8	NM	NEG
	OLN	41.0	5	3296 4	44	3532.1	40	2423 0	2	194.8	1 7	-150.0	NM	NEG
Group	OMGI	3.1	14	9543.2	13	9543 2	12	179 5	-11	554.0	1.7	23.1	23	13.4
olite (10)	PLIT	13.6	11	6753 0	27	6283.1	26	351.8	11	174.8	3.9	31.4	27	43.2
cair	PX	58.0	-6	3459.4	43	2814.9	45	2438.0	-6	145.4	2.4	240.0	45	24.2
aker Chemical	QCHM	11 0	-1	10971.2	9	10315.1	9	195.0	-8	193.8	5.7	-1.2	NM	NEG
ene	RXN	6.6	4	5076 2	35	4991.8	33	429.4	3	330.3	1.5	-34.2	NM	NEG
m & Haas	ROH	205.0	3	15786.7	6	14325.0	6	3278.0	7	252.4	6.3	194.0	-26	105.7
tts (9)	SCTT	7.7	24	3855.8	41	32176	42	466.0	13	233.4	1.7	35.4	35	21.8
as-Resources		3.2	9	21373	48	1992.3	48	326.3	-6	217.5	1.0	11 0	-53	29.2
on Carbide	UK	139.0	-10	10650.5	10	7865.1	16	4640.0	-5	355.5	3.0	243.0	48	57.2
royal Chemical (9)		32 4	3	11781.8	8	11692.8	8	907.9	6	330.1	3.6	-18.3	NM	NEG
co	WIT	49.5	69	6064.7	30	4109.7	38	2142.6	24	262.5	2.3	33.3	-59	148.5
CONGLOMERATES														
DUSTRY COMPOSITE		**3432.3**	**0**	**4776.9**		**2994.3**		**137770.9**	**3**	**191.7**	**2.5**	**11620.2**	**35**	**29.5**
ava Group	ACT	4 9	0	437.5	14	437.5	14	1241.1	8	110 8	0.4	-19.5	NM	NEG
edSignal	ALD	313.0	-2	3622.7	6	3733.2	6	11827.0	-2	136.9	2.6	910.0	30	34.4
tec Industries	COT	22.1 **	-4	2207.9	9	2039.7	9	1334.8	-2	133.5	1.7	101.5	-5	21.7
gie international	FIGIA	26.9	223	2134.7	10	1221.8	12	768.6	-3	61.0	3.5	-250.6	NM	NEG
neral Electric	GE	1297.0	-4	5842.3	4	5233.5	2	59827.0	6	269.5	2.2	6726.0	6	19 3
	ITT	460.0 **	-8	4693.9	5	4799.9	4	22762.0	-1	232.3	2.0	1282.0	NM	35.9
	LTV	15.1	-2	888.2	13	809.3	13	4163.2	9	244.9	0.4	550.0	NM	2.7
l (7)	PLL	40.0	15	6354.9	2	4716.2	5	687.2	0	109 1	5.8	104 3	-17	38.4
way	PRY A	10 8	8	2252.9	8	2312.9	8	650.1	14	135.4	1.7	36.1	65	29.9
emark International	PMI	41.0	-1	1715.5	12	1424.1	11	3097.3	5	129.6	13	229.7	578	179
ckwell International (9)	ROK	587.3	18	7624.5	1	5756.5	1	10840.0	-1	140.7	5.4	904 1	16	65.0
edyne	TDY	39.2	-19	1866.7	11	1824.6	10	2491.7	-14	118 7	1.6	113.3	30	34.6
ctron	TXT	195.0	13	3482.1	7	3505.5	7	9074.6	9	162.0	2.1	613.5	16	31.8
arc (4)	TRY	2.0	-6	180 3	15	115 7	15	1058.3	-2	95.3	0.2	-39.3	NM	NEG
W	TRW	378.0	-4	6176.5	3	4938.9	3	7948.0	-4	129 9	4 8	359.0	3	105.3
CONSUMER PRODUCTS														
DUSTRY COMPOSITE		**2322.9**	**7**	**2294.7**		**3198.2**		**159969.6**	**4**	**158.0**	**1.5**	**13965.2**	**-24**	**16.6**
A) APPLIANCES & HOME FURNISHINGS														
roup Composite		**290.6**	**3**	**2290.7**		**1864.5**		**16101.1**	**3**	**126.9**	**1.8**	**615.1**	**174**	**47.2**
mstrong World Industries	ACK	59.5	-1	2744.2	3	2477.9	3	2525.4	-1	116 5	2.4	92 8	NM	64 1
namics Corp. of America	DYA	1.3	4	1178.9	7	870.2	8	101.3	-8	95.4	1.2	3.3	-27	38 0
irwood		4.0	0	1142 4	8	1060.7	7	261.5	-2	73.9	1.5	-49 0	NM	NEG
dders (8)	FJQ	2.2	-28	1967.3	5	1864.5	5	158.6	-18	144.2	1 4	-2.3	NM	NEG
exsteel Industries (6)	FLXS	1.3	3	625.0	12	621.5	11	177 3	12	83.6	0.7	9.7	268	13.6
mball International (6)	KBALB	5.9	70	764.9	9	585.3	12	722.4	17	93.5	0 8	53.3	-12	111
-Z-Boy Chair (4)	LZB	6.2 **	13	710.7	10	658.1	9	684.1	10	78.4	0.9	45.3	14	13.7
ggett & Platt	LEG	5.0	0	384 6	13	418.1	13	1526.7	16	117 4	0.3	141.0	33	3.5
val (6)	RIVL	1.5	19	681.4	11	640.0	10	184.5	13	83.8	0 8	18.6	86	8 1
oyal Appliance Mfg.	RAM	2.6 **	2	1692.2	6	1377.4	6	313.9	-21	205.2	0.8	-13.0	NM	NEG
ro (7)	TTC	25.3 **	6	10227.7	1	8640.2	1	684 3	6	276.7	3.7	21 4	NM	118.4
Whirlpool	WHR	128.0	13	3233.1	2	2753.7	2	7533 0	3	190.3	1.7	391.0	6	32.7
enith Electronics	ZE	47.8 **	-14	2162.9	4	2001.7	4	1228.2	-1	55.6	3.9	-97.0	NM	NEG
B) OTHER CONSUMER GOODS														
Group Composite		**613.5**	**5**	**929.2**		**1563.5**		**89646.8**	**4**	**135.8**	**0.7**	**10246.0**	**-18**	**6.0**
merican Brands	AMB	39.7	18	870 6	6	628.2	6	8287.5	-6	181.7	0.5	1076.1	-23	3.7
arry (R. G.)	RGB	2.8	-3	1166.7	5	1173 6	5	101.2	-1	42.2	2 8	6 0	26	46 8
oors (Adolph)	ACCOB	13.0	5	20981	4	2098.8	4	1581.8	2	255.1	0.8	-56.8	NM	NEG
lyde Athletic Industries	HYDEA	1 4	37	32612	1	2776.6	1	103.7	28	244.1	13	7.7	21	17 9
ike (5)	NKE	22.6	14	2354.2	3	2163.6	3	3931.0	15	409.5	0.6	594.5	14	3.8
epsiCo	PEP	113.0	11	267.1	7	301.0	7	25020.7	14	59.2	0.5	2422.5	28	4.7
hilip Morris	MO	421.0	3	2433.5	2	2287.8	2	50621.0	1	292.6	0.8	6196.0	-28	6.8

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COMPANY	STOCK SYMBOL	R&D EXPENSES						SALES				PROFITS		
		1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	PER EMPLOYEE 1993 RANK	PER EMPLOYEE AVG. 1989-93 $	PER EMPLOYEE AVG. 1989-93 RANK	1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	1993 $ MIL.	CHANGE FROM 1992 %	R& A
(C) PERSONAL CARE		154.0	2	4052.6	6	3601.3	7	4401.0	7	115.8	3.5	262.0	45	
Group Composite		184	21	991.5	19	757.1	20	1944.5	9	104.5	0.9	1376	46	
Avon Products	AVP	20.7	−30	694.6	17	1235.0	16	1575.5	25	109.4	1.1	57.6	540	
Block Drug (3)	BLOCA	20.4	1	5828.2	6	5062.0	6	770.8	8	106.7	1.5	54.1	25	
Chattem (11)	CHTT	1.3	5	3445.3	12	3287.0	10	105	−4	124.0	5.5	8.6	NM	
Church & Dwight	CHD	21.2	19	19317.5	1	13541.7	1	507.7	12	400.2		10.7	9	
Clorox (6)	CLX	42.4	1	9030.8	4	7727.7	4	1634.2	6	347.7	2.6	3.5	Nas	
Colgate-Palmolive	CL	139.9	11	4996.4	7	4291.1	7	7141.3	2	255.0	2.0	863.7		
Del Laboratories	DLI	4.0	16	3659.3	10	3156.6	12	166.5	16	154.2	2.4	7.0	29	56.
Ecolab	ECL	23.8	17	3134.1	13	2179.8	16	1041.5	4	137.3	2.3	109.3	19	21.
Gillette	G	133.1	8	3985.0	9	3495.1	9	5410.8	5	162.0	2.5	682.7	−18	19.
Helene Curtis Industries (2)	HC	22.0	18	6280.9	5	5324.7	5	1167.8	15	333.7	1.9	40.5	14	54.
Maybelline	MAY	4.4	13	2553.7	15	2455.1	14	347.2	13	201.5	1.3	35.9	NM	12.
Neutrogena (10)	NGNA	3.0	19	3583.1	11	2892.1	13	281.7	5	334.6	1.1	40.2	6	7.
Procter & Gamble (6)	PG	956.0	11	9236.7	3	8291.4	3	30433.0	4	294.0	3.1	349.0	−88	273.
St. Ives Laboratories	SWIS	1.3	15	2542.7	16	2382.1	15	165.9	11	329.7	0.8	4.4	−39	29.
Stepan	SCL	12.6	11	9687.4	2	8671.0	2	438.8	1	337.0	2.9	19.6	13	64.
Sybron Chemicals	SYCM	2.9	1	4142.2	8	4141.5	8	136.0	−4	195.4	2.1	12.0	−8	24.
Tambrands	TMB	9.9	−16	2744.7	14	3226.4	11	611.5	11	169.9	1.6	118.7	−38	8.
6 CONTAINERS & PACKAGING														
INDUSTRY COMPOSITE		154.0	7	1347.2		1986.0		17174.3	6	150.3	0.9	187.3	−81	82.2
Ball	BLL	15.7	8	11251	9	1142.4	9	2440.9	12	174.9	0.6	−50.1	NM	NEG
Bemis	BMS	14.1	−12	1861.7	8	1837.0	8	1203.5	2	159.1	1.2	76.7	−18	18.4
Continental Can	CAN	12.9	−12	3465.0	2	4027.1	1	481.8	−6	129.8	2.7	1.7	−51	739.2
Crown Cork & Seal	CCK	23.3 **	40	1096.3	10	940.7	10	4162.6	10	195.9	0.6	284.8	9	8.2
Liqui-Box	LIQB	2.0	31	2248.6	7	2518.4	5	130.1	12	149.7	1.5	21.6	15	9.0
Nashua	NSH	12.7	7	3162.3	4	2323.5	7	555.7	1	138.5	2.3	−31.4	NM	NEG
Owens-Illinois	OI	23.1	1	799.3	12	591.1	13	3535.0	4	122.3	0.7	−294.5	NM	NEG
Paragon Trade Brands	PTB	6.0	9	3538.2	1	3538.2	2	562.9	16	331.1	1.1	48.4	42	12.4
Playtex Products	PYX	5.5	8	3437.5	3	3305.0	3	409.9	7	256.2	1.3	−122.8	NM	NEG
Riverwood International	RVW	8.8 **	52	1031.9	11	673.3	12	1120.4	0	131.8	0.8	1.2	−98	732.7
Sealright	SRCO	5.7	8	2943.7	6	2943.1	4	275.7	5	142.3	2.1	19.1	−29	29.8
Sonoco Products	SONO	12.9	10	783.1	13	831.3	11	1947.2	6	118.2	0.7	194.0	46	6.6
West	WST	11.4 **	3	2984.3	5	2431.6	6	348.7	3	91.3	3.3	38.5	8	29.6
7 ELECTRICAL & ELECTRONICS														
INDUSTRY COMPOSITE		8504.5	8	7060.7		9524.0		154835.4	12	128.4	5.5	14324.7	54	59.4
(A) ELECTRICAL PRODUCTS														
Group Composite		865.7	6	2705.6		3403.1		35090.8	3	109.7	2.5	2156.2	−24	40.1
Acme Electric (6)	ACE	5.8 **	2	8224.3	3	7279.1	3	75.8	4	108.3	7.6	−1.0	NM	NEG
American Power Conversion	APCC	7.1	45	7816.2	4	6282.4	4	250.3	59	273.8	2.9	75.9	76	9.4
Ametek	AME	15.1	3	2516.7	19	2334.8	18	732.2	−5	122.0	2.1	−11.2	NM	NEG
Baldor Electric	BEZ	12.9	14	4158.6	10	3465.4	10	356.6	12	115.0	3.6	32.4	30	39.9
Best Power Technology	BPTI	7.3	13	8596.9	2	8339.1	2	132.6	12	156.8	5.5	17.2	19	42.2
Coleman	CLN	3.5	13	1061.7	28	1068.8	27	578.8	14	176.7	0.6	59.5	22	5.8
Computer Products	CPRD	9.4	5	6084.0	5	4616.7	8	123.8	8	80.0	7.6	1.0	−72	940.3
Cooper Industries	CBE	42.1	0	850.5	29	828.3	29	6252.6	2	126.3	0.7	625.4	8	6.7
Emerson Electric (9)	EMR	272.4	11	3804.5	11	3385.7	11	8173.8	6	114.2	3.3	1112.0	7	24.5
Exide Electronics Group (9)	XUPS	8.3	9	5903.6	6	5718.4	5	281.9	32	201.4	2.9	14.3	77	57.7
Franklin Electric	FELE	4.0	68	1988.0	23	1259.1	25	206.4	4	103.2	1.9	22.9	1	17.4
Genlyte Group	GLYT	3.6	2	1200.3	27	1183.6	26	429.1	1	144.3	0.8	6.0	NM	59.3
Holophane	HLPH	4.9	−3	4721.5	9	4819.0	6	138.8	7	132.8	3.6	7.7	101	64.5
Hubbell	HUB.B	15.4 **	12	2616.8	18	2506.5	15	832.4	6	141.4	1.9	81.5	−38	18.9
Joslyn	JOSL	6.2	24	3061.7	15	2466.9	16	217.7	0	107.5	2.8	22.8	2	27.2
Juno Lighting (11)	JUNO	2.7	78	3083.7	14	2988.8	14	109.1	13	126.9	2.4	28.5	22	9.3
Kollmorgen	KOL	9.3	−12	5625.3	8	4735.9	7	185.5	−5	111.8	5.0	3.9	NM	239.2
Lamson & Sessions	LMS	3.3	0	1772.3	24	1545.3	24	301.5	6	161.9	1.1	−5.8	NM	NEG
Littelfuse	LFUS	4.8	26	2428.3	20	2207.4	19	160.7	7	81.2	3.0	14.2	274	33.8
MagneTek (6)	MAG	23.8	35	1352.3	26	878.5	28	1512.2	23	85.9	1.6	45.6	−13	52.2

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COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R& AS % OF PRO
Powell Industries (10)	POWL	2.0	2	2726.5	17	1925.9	21	138.1	1	185.1	1.5	6.3	-47	32
Raychem (6)	RYC	129.0	-8	11974.7	1	11654.9	1	1385.7	6	128.6	9.3	39.6	90	325
Reliance Electric	REE	43.0	8	3116.8	13	2431.1	17	1608.0	4	116.6	2.7	65.0	-24	66
Robbins & Myers (8)	ROBN	1.3	7	2048.8	22	1885.0	22	85.1	13	138.3	1.5	9.7	-1	12
Thomas & Betts	TNB	22.6	8	2820.5	16	3243.4	12	1075.9	2	134.5	2.1	78.4	12	28
Thomas Industries	TII	12.4 **	0	3667.0	12	3194.1	13	450.1	7	132.8	2.8	7.8	NM	159
Westinghouse Electric	WX	173.0	7	1701.9	25	1645.8	23	8875.0	-4	87.3	2.0	-236.0	NM	NE
Woodhead Industries (9)	WDHD	2.1 **	3	2222.8	21	2184.0	20	89.9	13	94.9	2.3	9.5	23	22
Woodward Governor (9)	WGOV	18.5	16	5667.9	7	4239.4	9	331.2	-12	101.5	5.6	23.1	-30	80
(B) ELECTRONICS														
Group Composite		**3084.0**	**4**	**7667.5**		**6631.0**		**56518.2**	**12**	**140.1**	**5.5**	**4724.9**	**110**	**65.**
AEL Industries (2)	AELNA	2.5	44	1958.5	30	1478.2	29	113.1	-19	88.6	2.2	-2.0	NM	NE
Allen Group	ALN	6.7	120	2677.6	28	1100.9	31	280.0	32	112.0	2.4	33.0	29	20
Ampex	AMPX	26.3	-37	24764.6	2	19222.7	4	169.7	-29	159.8	15.5	-296.3	NM	NE
Andrew (9)	ANDW	22.0	9	7527.7	11	6635.1	12	430.8	-3	147.3	5.1	43.6	9	50
Aydin	AYD	4.8	-9	3678.5	26	3468.3	23	141.5	-3	108.8	3.4	-7.3	NM	NE
California Microwave (6)	CMIC	8.2	64	6091.6	16	3436.0	24	267.2	34	197.5	3.1	15.9	99	51.
Checkpoint Systems	CKP	5.4	20	3947.3	23	3974.3	19	93.0	29	68.1	5.8	2.1	-58	260.
Cobra Electronics	COBR	1.0 **	-29	6849.3	15	5575.2	15	98.8	-16	677.0	1.0	-4.4	NM	NE
Compression Labs	CLIX	11.3	38	25926.3	1	17877.3	5	141.3	31	325.6	8.0	-3.5	NM	NE
Digital Microwave (3)	DMIC	10.1	-22	21737.1	4	20966.2	2	107.9	20	232.6	9.3	-6.7	NM	NE
EDO	EDO	6.0	14	5750.7	17	3683.8	21	104.1	-17	99.1	5.8	-14.2	NM	NE
Electromagnetic Sciences	ELMG	8.2	8	9058.9	10	8802.6	8	99.0	38	110.0	8.2	2.4	17	343
General Instrument	GIC	73.7	27	7301.1	14	6330.5	13	1392.5	30	137.9	5.3	113.9	NM	64.
GM-Hughes Electronics	GMH	612.1	-10	7339.3	13	6843.0	11	13450.2	10	161.3	4.6	1494.2	NM	41
Harmon Industries	HRMN	3.4	-3	3867.4	24	4324.3	17	99.3	21	111.6	3.5	1.1	57	31.
Harris (6)	HRS	120.6	-1	4261.5	21	4057.4	18	3099.1	3	109.5	3.9	169.8	36	71
Itron	ITRI	12.4	26	20741.7	5	20741.7	3	88.6	31	147.7	14.0	7.4	676	168
Knogo (2)	KNO	3.5	14	4517.3	19	3547.6	22	94.4	17	120.8	3.7	3.6	NM	98.
Litton Industries (7)	LIT	53.5	-30	1656.3	31	2885.4	28	3474.2	-6	107.6	1.5	144.4	0	37
Loral (3)	LOR	124.7	1	5090.5	18	5508.8	16	3335.4	16	136.1	3.7	256.2	7	48.
Lowrance Electronics (7)	LEIX	2.7	76	3694.1	25	3202.8	25	79.6	16	109.2	3.4	4.4	64	60
Microdyne (9)	MCDY	4.2	7	9481.8	8	5739.6	14	78.2	8	177.7	5.3	-0.5	NM	NE
Mosler (6)		2.1	7	NA	NR	NA	NR	210.6	3	NA	1.0	-4.1	NM	NE
Motorola	MOT	1521.0	16	12675.0	6	10519.5	6	16963.0	28	141.4	9.0	1525.0	91	99.
Qualcomm (9)	QCOM	27.4	9	23076.6	3	29595.7	1	168.7	57	142.0	16.3	13.1	NM	209.
Radiation Systems (6)	RADS	2.0	19	2016.2	29	1171.1	30	121.8	-4	123.4	1.6	15.6	-8	12.8
Raytheon	RTN	279.4	-4	4380.1	20	3966.9	20	9201.2	2	144.2	3.0	1047.3	10	26.7
Sensormatic Electronics (6)	SRM	11.9	25	2975.0	27	2975.0	26	487.3	57	121.8	2.4	72.0	75	16.5
Stanford Telecommunications (3)	STEL	6.9	-12	7484.8	12	8010.2	10	92.8	-2	100.5	7.5	1.9	-63	365.7
Tech-Sym	TSY	7.3	20	4174.4	22	2958.1	27	184.3	3	105.7	3.9	16.5	63	44.1
United Industrial	UIC	1.5	-42	660.0	32	1025.1	32	253.0	1	110.0	0.6	-20.2	NM	NEG
Varian Associates (9)	VAR	73.9	-4	9478.5	9	8471.8	9	1311.0	2	168.1	5.6	73.9	18	100
Watkins-Johnson	WJ	27.2	0	11365.3	7	9227.9	7	286.3	8	119.8	9.5	16.8	134	161.2
(C) INSTRUMENTS														
Group Composite		**1310.9**	**6**	**6443.1**		**8723.0**		**24276.2**	**7**	**119.3**	**5.4**	**1112.9**	**-19**	**117.8**
Analogic (7)	ALOG	26.9	17	25332.1	2	18213.6	3	173.6	20	163.7	15.5	18.6	39	144.7
Autoclave Engineers (5)	ACLV	1.8	2	2551.1	35	2922.9	32	77.3	-4	111.2	2.3	0.7	-66	261.1
Badger Meter	BMI	3.6	-12	4320.3	31	4428.8	30	84.5	3	100.2	4.3	3.3	185	110.2
Beckman Instruments	BEC	93.3 **	9	14177.2	11	11937.1	12	875.7	-4	133.1	10.7	-53.9	NM	NEG
BEI Electronics (9)	BEII	5.7 **	2	4278.1	32	4031.0	31	146.7	-6	109.4	3.9	5.6	-50	103.0
Bio-Rad Laboratories	BIO.A	34.2	-1	14554.9	10	12057.1	11	328.6	-1	139.8	10.4	4.7	-83	731.2
Coherent (9)	COHR	21.7	1	17809.4	4	15691.2	7	196.9	2	161.8	11.0	13.9	53	156.3
Cohu	COH	5.5	49	9706.4	16	5214.7	25	75.3	38	133.9	7.2	11.0	91	49.5
Cubic (9)	CUB	3.6	5	1844.6	38	1379.5	38	221.4	-7	113.6	1.6	1.8	-66	204.4
Daniel Industries (9)	DAN	5.3	-2	3562.0	33	2120.3	35	180.2	-14	120.2	3.0	8.1	-38	66.1
Dionex (6)	DNEX	9.3	13	14684.0	9	12766.8	10	105.6	10	166.8	8.8	24.9	11	37.4
ESCO Electronics (9)	ESE	12.3	-7	2670.0	34	2409.3	34	459.7	13	99.9	2.7	6.4	224	192.2
Fischer & Porter	FP	11.0	-11	5195.5	29	5027.0	28	221.6	-4	104.9	5.0	1.2	-78	878.5

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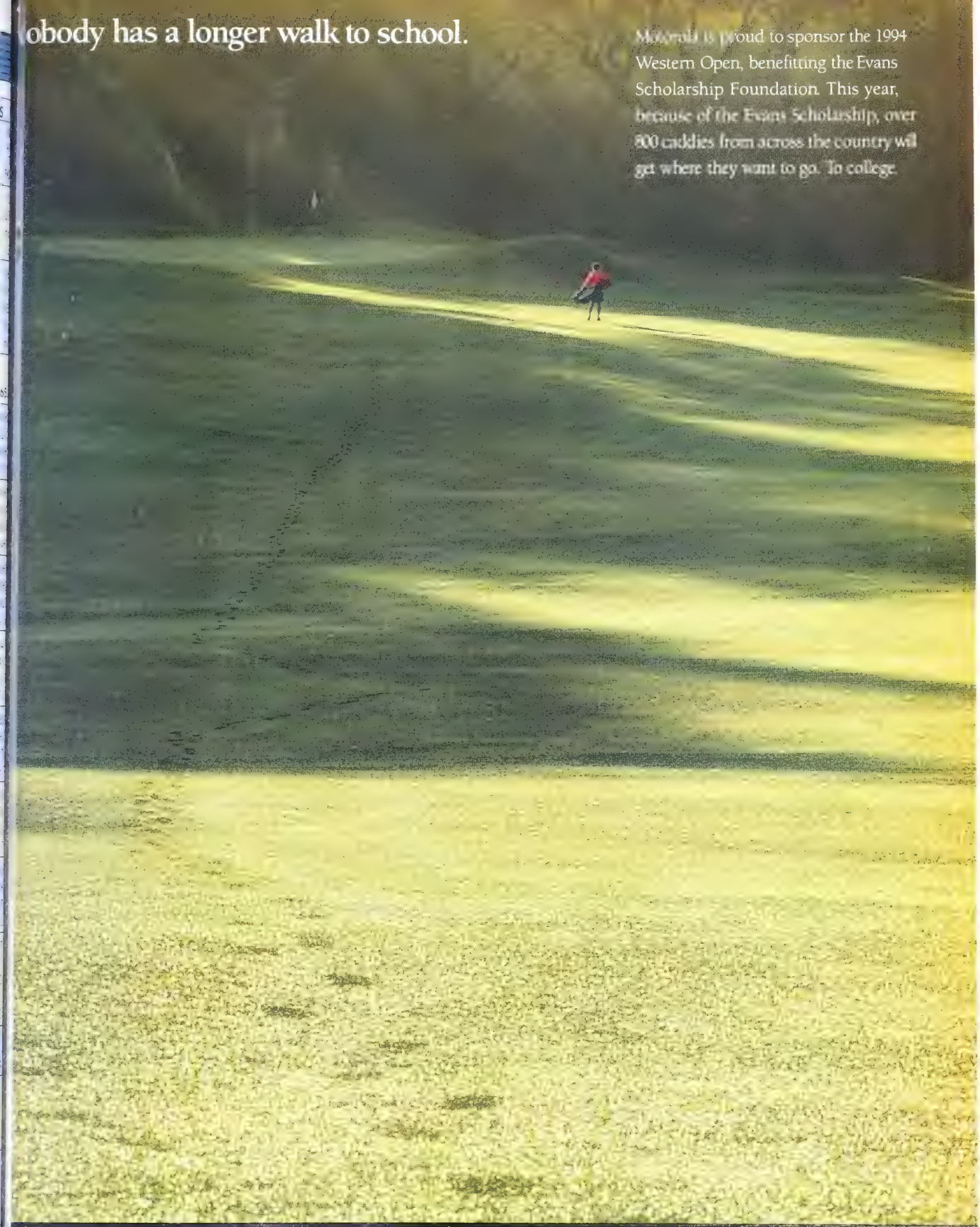

Don't miss the oldest event on the PGA Tour. The Motorola Western Open can be seen on USA Network Thursday, June 30 and Friday, July 1, 4:00-6:00 p.m. EDT, and on CBS TV Saturday, July 2 and Sunday, July 3, 4:00-6:00 p.m. EDT.

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WESTERN OPEN

R&D SCOREBOARD

COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
Fluke (4)	FLK	21.4	2	10074.7	15	9410.0	15	271.8	13	127.7	7.9	21.2	516	101.2
Gelman Sciences (7)	GSC	4.1	28	5004.8	30	5054.0	27	86.2	6	104.2	4.8	4.7	NM	87.5
GenRad	GEN	15.3	-24	12957.8	12	15771.0	6	158.7	11	134.0	9.7	-43.8	NM	NEG
Hach (4)	HACH	5.8	16	6391.1	27	5629.0	24	94.0	11	104.4	6.1	13.3	10	43.2
Honeywell	HON	337.4	8	6451.2	25	5159.8	26	5963.0	-4	114.0	5.7	478.5	-25	70.5
Imo Industries	IMD	11.3	-6	1743.4	39	1799.4	36	641.7	-13	98.7	1.8	-24.0	NM	NEG
Instron	ISN	7.2	-10	6448.4	26	7170.8	20	122.8	6	109.3	5.9	3.9	-31	186.7
Johnson Controls (9)	JCI	95.0	44	1896.2	37	1485.6	37	6181.7	20	123.4	1.5	250.7	10	37.9
K-Tron International	KTII	4.9	-3	6820.4	23	6171.9	22	107.7	-9	148.7	4.6	-1.8	NM	NEG
Keithley Instruments (9)	KEI	10.3	-10	16486.4	5	15929.3	5	91.1	-4	145.8	11.3	5.5	NM	186.3
KLA Instruments (6)	KLAC	15.3	-29	15300.0	8	17750.3	4	167.2	7	167.2	9.1	9.3	NM	164.9
LTX (7)	LTXX	19.7 **	-10	21230.1	3	23655.5	2	172.9	16	185.9	11.4	-6.9	NM	NEG
Measurex (11)	MX	21.1	3	9398.2	19	8617.0	17	254.0	1	112.9	8.3	12.7	656	166.8
Millipore	MIL	35.0	6	9539.3	17	10036.6	13	445.4	4	121.6	7.8	63.2	38	55.3
Moore Products	MORP	9.5	-3	8253.7	21	7331.3	19	88.1	-9	76.8	10.8	-5.9	NM	NEG
MTS Systems (9)	MTSC	13.7	37	9465.8	18	7559.7	18	189.5	18	131.0	7.2	14.9	132	91.7
Newport	NEWP	4.8	-21	7710.8	22	8751.7	16	84.1	-4	135.9	5.7	-3.2	NM	NEG
Oak Industries	OAK	3.3	146	1276.7	41	659.6	41	219.6	53	83.8	1.5	26.3	200	12.7
Optical Coating Laboratory (10)	OCLI	5.9	-28	5353.2	28	6017.0	23	123.0	7	111.1	4.8	-8.0	NM	NEG
Perkin-Elmer (6)	PKN	83.8 **	3	12775.7	13	NA	NR	1011.3	NA	154.1	8.3	43.9	NA	190.9
Signal Technology	STCX	2.4	81	2424.7	36	2424.7	33	97.1	19	97.4	2.5	7.9	31	30.6
Sparton (6)	SPA	3.4	26	1459.1	40	1057.5	39	233.1	-5	101.3	1.4	10.6	-10	31.5
Tektronix (5)	TEK	157.1	-7	15962.2	6	14263.1	9	1302.4	0	132.4	12.1	-99.1	NM	NEG
Teradyne	TER	62.4 **	1	15589.0	7	14792.0	8	554.7	5	138.7	11.2	51.3	97	121.5
Thermedics	TMD	6.4	44	11613.7	14	9634.9	14	80.2	75	144.8	8.0	11.6	158	55.2
Thermo Electron	TMO	58.9	52	6698.1	24	4633.3	29	1246.6	32	141.7	4.7	131.1	29	45.0
Thermo Instrument Systems	TH.	34.5	32	8556.9	20	6934.4	21	584.2	38	144.8	5.9	78.9	38	43.8
Tracor	TTRR	3.5	24	397.5	42	713.1	40	407.5	56	45.8	0.9	15.5	110	22.9
Trimble Navigation	TRMB	23.1	19	27728.3	1	32867.1	1	149.5	17	179.7	15.4	4.2	NM	548.8
(D) SEMICONDUCTORS														
Group Composite		**3243.9**	**14**	**11634.2**		**15808.6**		**38950.2**	**24**	**139.7**	**8.3**	**6330.6**	**122**	**51.2**
Advanced Micro Devices	AMD	262.8	15	21791.2	18	18583.4	17	1648.3	9	136.7	15.9	317.8	17	82.7
Altera	ALTR	16.8	6	31967.7	11	31887.5	10	140.3	38	266.2	12.0	31.4	74	53.7
AMP	AMP	258.0	-5	9591.1	30	10408.9	26	3450.6	3	128.3	7.5	485.9	1	53.1
Amphenol	APH	14.3 **	4	2724.5	41	2550.1	42	604.0	32	114.8	2.4	38.1	235	37.6
Analog Devices (10)	ADI	94.1	7	17756.0	21	15827.8	22	666.3	17	125.7	14.1	55.5	193	169.5
Atmel	ATML	25.6	40	19955.5	20	18564.6	18	221.7	59	173.0	11.5	44.8	125	57.1
Augat	AUG	19.0 **	0	4418.6	38	4397.7	36	420.3	16	97.7	4.5	23.6	142	80.5
Brooktree (9)	BTRE	22.9	21	40472.7	8	34536.7	9	111.3	21	196.4	20.6	45.3	166	50.6
Burr-Brown	BBRC	19.8	9	13168.0	25	12428.7	24	168.6	3	112.4	11.7	4.5	164	434.4
Chips & Technologies (6)	CHPS	22.6	-51	79975.2	1	74952.3	1	97.9	-31	345.8	23.1	-49.1	NM	NEG
CTS	CTS	5.7	-6	1436.0	47	1073.2	48	237.0	4	59.6	2.4	10.3	169	55.6
Cypress Semiconductor	CY	49.8	-23	39459.6	9	37590.9	7	304.5	12	241.3	16.4	12.6	NM	396.3
Cyrix	CYRX	15.7	89	68694.3	2	56839.0	3	125.1	72	546.3	12.6	30.4	124	51.8
Dallas Semiconductor	DS	19.4	17	25938.5	13	23163.5	13	156.9	31	209.7	12.4	39.7	37	48.9
Diceon Electronics (9)	DICN	2.3	-20	2026.4	42	1317.1	46	99.3	-2	87.4	2.3	-16.3	NM	NEG
Exar (3)	EXAR	11.4	6	22983.9	16	17129.9	20	146.1	5	294.5	7.8	21.1	24	54.0
GTI	GGTI	3.9 **	14	5801	50	591.5	51	127.6	22	18.8	3.1	18.4	38	21.5
Insilco	INSL	1.2	-15	221.3	52	238.5	52	615.1	6	116.1	0.2	-45.5	NM	NEG
Integrated Device Technology (3)	[illegible]	53.5	3	22146.2	17	21475.2	14	236.3	17	97.9	22.6	6.3	NM	851.6
Intel	INTC	970.0	24	32881.3	10	25336.1	12	8782.0	50	297.7	11.0	3530.0	125	27.5
International Rectifier (6)	IRF	14.1	50	4741.8	37	3236.7	40	281.7	6	94.9	5.0	-2.6	NM	NEG
Jabil Circuit (8)	JBIL	1.7	86	1668.0	45	1448.0	45	334.7	93	335.7	0.5	13.4	169	12.4
Kemet (3)	KMET	8.5 **	6	1175.4	48	1195.5	47	347.7	18	48.3	2.4	20.9	NM	40.5
Lattice Semiconductor (3)	LSCC	16.5	32	47228.6	4	40280.4	6	103.4	46	295.4	16.0	25.2	60	65.6
Linear Technology (6)	LLTC	14.8	20	16941.5	23	13983.4	23	150.9	26	173.0	9.8	55.7	45	26.5
LSI Logic	LSI	79.0	0	23440.6	15	18668.2	16	718.8	16	213.3	11.0	80.7	NM	97.9
Maxim Integrated Products (6)	MXIM	16.4	25	20430.3	19	18334.6	19	110.2	27	137.0	14.9	26.6	26	61.8
Methode Electronics (4)	METHA	8.9	16	4228.6	39	3897.2	37	172.0	16	81.9	5.2	22.5	66	39.4
Microchip Technology (3)	MCHP	9.1	12	8763.5	32	8763.5	29	88.7	21	85.2	10.3	4.6	751	200.1

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R&D SCOREBOARD

)MPANY	STOCK SYMBOL	R&D EXPENSES						SALES				PROFITS		
		1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	1993 $ MIL.	CHANGE FROM . 1992 %	R&D AS % OF PROFITS
:ron Technology (8)	MU	57.3	20	11698.6	27	9661.1	27	828.3	64	169.0	6.9	162.6	NM	35.3
:ronics Computers (9)	MCRN	6.4	−6	24372.6	14	28354.8	11	182.2	18	692.8	3.5	16.2	28	39.7
lex (6)	MOLX	53.4	18	6963.9	35	5602.2	35	859.3	11	112.0	6.2	133.5	14	40.0
tional Semiconductor (5)	NSM	202.3	5	8645.3	34	7662.9	33	2013.7	17	86.1	10.0	149.9	NM	135.0
ti	OPTI	6.5	6	45062.1	5	52820.2	4	85.3	−13	588.0	7.7	14.9	1	43.7
ad-Rite (9)	RDRT	15.4	45	1470.8	46	1785.5	43	482.4	24	46.2	3.2	−1.9	NM	NEG
gers	ROG	6.7	−18	6107.8	36	3583.3	39	123.2	−29	111.6	5.5	6.7	NM	100.4
Systems (6)	SCIS	31.4 *	−7	2904.3	40	3681.1	38	1697.1	62	157.0	1.9	37.4	NM	83.9
eldahl (8)	SHEL	1.9	−11	2003.1	43	1672.6	44	82.1	−2	85.3	2.4	1.5	558	129.7
rra Semiconductor	SERA	15.4	6	44237.8	7	41226.9	5	83.4	−10	238.9	18.5	−13.2	NM	NEG
conix	SILI	13.4	60	11037.2	28	8819.9	28	170.3	9	140.6	7.9	6.7	44	201.0
ectron (8)	SLR	3.8	20	827.9	49	841.6	49	836.3	106	184.0	0.5	48.6	101	7.7
nward Technologies (6)	SUNT	4.5 **	25	1745.0	44	2617.4	41	117.3	56	45.4	3.8	11.7	180	38.6
as Instruments	TXN	590.0	26	9991.9	29	8130.9	31	8523.0	14	144.3	6.9	696.0	89	84.8
dent Microsystems (6)	TRID	6.8	20	55065.0	3	57516.6	2	77.7	15	631.9	8.7	15.9	−14	42.6
itrode (1)	UTR	8.1	27	11946.7	26	7650.3	34	86.9	−1	128.8	9.3	12.8	41	62.8
or	VICR	6.0	39	9174.5	31	7694.9	32	84.0	32	127.5	7.2	24.2	26	25.0
hay Intertechnology	VSH	7.1	−1	499.8	51	670.9	50	856.3	29	60.3	0.8	50.9	34	13.9
SI Technology	VLSI	84.6	21	31826.2	12	16796.4	21	515.9	20	194.0	16.4	20.5	NM	412.2
or	XICO	12.8	−43	17695.6	22	20023.8	15	104.4	12	143.8	12.3	−5.8	NM	NEG
inx (3)	XLNX	24.3	38	44716.9	6	37565.2	8	178.0	31	327.2	13.7	43.6	29	55.8
og	ZLOG	20.8	28	14269.2	24	10667.8	25	202.7	39	138.9	10.3	41.8	66	49.8
tec	ZTEC	6.9	−7	8735.5	33	8740.1	30	93.3	2	117.6	7.4	4.4	NM	158.0
FOOD														
DUSTRY COMPOSITE		**640.8**	**6**	**1390.8**		**2965.2**		**80081.8**	**4**	**176.6**	**0.8**	**5962.4**	**−8**	**10.7**
nerican Crystal Sugar (8)		5.3	−12	2632.0	6	2632.0	6	542.9	0	271.4	1.0	19.8	98	26.6
nerican Maize-Products	AZE.A	3.9	24	1958.7	9	1617.4	9	538.5	−1	271.2	0.7	1.0	−97	375.5
cher Daniels Midland (6)	ADM	14.8	1	1044.6	15	963.4	14	9811.4	6	692.5	0.2	746.0	−2	2.0
rden	BN	31.9	4	807.6	18	687.6	18	5506.3	−6	139.4	0.6	−43.4	NM	NEG
mpbell Soup (7)	CPB	68.8	15	1466.3	12	1207.4	12	6586.2	5	140.4	1.0	528.6	−34	13.0
ntinental Baking Group (9)	CBG	7.3	−14	NA	NR	NA	NR	1997.0	−1	NA	0.4	52.2	−38	14.0
C International	CPC	49.3	8	1264.1	14	1130.1	13	6738.0	2	172.8	0.7	790.3	6	6.2
kalb Genetics (8)	SEEDB	43.9	4	19607.0	2	16013.9	2	291.5	−3	130.2	15.1	0.6	−96	7316.7
l Monte Foods (6)		7.0	17	500.0	20	500.0	21	1555.0	9	111.1	0.5	−142.0	NM	NEG
rmland Industries (8)		3.3	−1	234.3	23	430.2	22	4722.9	38	335.0	0.1	−36.0	NM	NEG
neral Mills (5)	GIS	60.1	−3	495.5	21	513.4	20	8134.6	5	67.1	0.7	844.0	0	7.1
nnaford Brothers	HRD	3.1	−4	212.0	24	152.5	24	2054.9	−1	139.8	0.2	92.2	13	3.4
rshey Foods	HSY	26.2	8	1644.7	11	1551.3	10	3488.2	8	219.4	0.8	510.9	27	5.1
rmel Foods (10)	HRL	6.9	19	639.4	19	647.6	19	2854.0	1	264.3	0.2	161.1	7	4.3
perial Holly (3)	IHK	3.6	19	844.1	17	752.1	16	647.8	−6	152.8	0.6	−0.3	NM	NEG
ernational Multifoods (2)	IMC	2.1	40	250.3	22	225.9	23	2224.7	0	265.2	0.1	−24.9	NM	NEG
llogg	K	39.8	9	2464.4	8	2284.2	7	6295.4	2	389.8	0.6	1034.1	−3	3.8
cCormick (11)	MCCRK	12.3	4	1425.5	13	1362.2	11	1556.6	6	181.0	0.8	160.2	8	7.7
nwest (8)	PENW	5.7	54	11301.4	3	8083.8	3	135.5	8	270.5	4.2	7.6	−25	74.1
oneer Hi-Bred International (8)	PHYB	105.2	14	21882.7	1	17900.0	1	1343.4	6	279.5	7.8	223.3	−6	47.1
uaker Oats (6)	OAT	52.4	1	2594.1	7	2129.8	8	5730.6	3	283.7	0.9	467.6	11	11.2
alston Purina Group (9)	RAL	65.0	−6	NA	NR	NA	NR	5915.4	3	NA	1.1	501.5	5	13.0
reckels Industries (6)	SPKL	2.1	31	856.4	16	856.4	15	334.7	−8	136.5	0.6	−27.3	NM	NEG
lvan Foods Holdings	SYLN	1.7	50	1846.7	10	708.3	17	105.3	−1	117.1	1.6	1.9	−75	88.2
niversal Foods (9)	UFC	17.9	3	3284.4	4	2680.6	5	891.6	1	163.6	2.0	90.6	35	19.8
orthington Foods	WFDS	1.4	21	2997.9	5	2731.0	4	79.3	4	167.3	1.8	2.9	−36	48.4
FUEL														
IDUSTRY COMPOSITE		**2660.9**	**−3**	**4466.7**		**3417.5**		**343267.8**	**−4**	**576.2**	**0.8**	**22125.4**	**12**	**12.0**
A) OIL, GAS & COAL														
roup Composite		**1905.2**	**−5**	**4384.6**		**3459.9**		**323583.3**	**−4**	**744.7**	**0.6**	**21252.4**	**12**	**9.0**
moco	AN	292.0	−3	6304.4	2	5919.5	3	25336.0	0	547.0	1.2	2507.0	150	11.6
shland Oil (9)	ASH	14.0	−2	440.7	14	414.9	14	9611.4	0	302.2	0.1	200.3	NM	7.0
lantic Richfield	ARC	109.0	22	4342.6	6	4309.8	7	17189.0	−1	684.8	0.6	634.0	−67	17.2

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COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFIT
Chevron	CHV	206.0	-10	4329.9	7	4372.0	6	32123.0	-6	675.2	0.6	2426.0	-30	8.5
Exxon	XON	593.0	-5	6516.5	1	6325.0	1	97825.0	-5	1075.0	0.6	8302.0	10	7.1
Fina	FI	12.2	8	3794.4	8	3167.7	8	3378.9	1	1048.1	0.4	96.1	378	12.7
Kerr-McGee	KMG	19.0	12	3269.1	9	2561.5	10	3281.0	-3	564.5	0.6	118.0	NM	16.1
Mobil	MOB	301.0	8	4862.7	4	4470.4	5	56576.0	-1	914.0	0.5	4015.0	40	7.5
Occidental Petroleum	OXY	24.0	14	1208.5	11	931.9	11	8116.0	-4	408.7	0.3	218.0	-33	11.0
Phillips Petroleum	P	93.0	-3	4793.8	5	5258.9	4	12309.0	3	634.5	0.8	538.0	5	17.3
Sun	SUN	9.0	-25	620.7	13	751.7	13	7297.0	-12	503.2	0.1	453.0	NM	2.0
Texaco	TX	185.0	8	5689.9	3	6020.8	2	33245.0	-7	1022.5	0.6	1189.0	-13	15.6
Unocal	UCL	29.0	-42	2130.3	10	3124.6	9	7261.0	-18	533.4	0.4	611.0	75	4.7
USX-Marathon Group	MRO	19.0	0	867.0	12	809.6	12	10035.0	-6	457.9	0.2	-55.0	NM	NEG
(B) PETROLEUM SERVICES														
Group Composite		**755.7**	**5**	**4688.0**		**3363.7**		**19684.6**	**3**	**122.1**	**3.8**	**872.9**	**0**	**86.6**
Baker Hughes (9)	BHI	41.1	-8	2231.9	9	2087.8	8	2701.7	6	146.8	1.5	100.1	213	41.0
BJ Services (9)	BJS	6.5	34	2472.4	8	2136.6	7	394.4	20	150.0	1.6	16.8	NM	38.6
Digicon (7)	DGC	4.2	10	3057.8	6	3242.7	5	117.7	6	85.0	3.6	0.4	-94	1206.6
Halliburton	HAL	126.5	13	1955.2	10	1655.8	10	6274.5	-4	97.0	2.0	-189.1	NM	NEG
Oceaneering International (3)	OII	6.5	38	3608.3	5	2621.3	6	215.6	11	119.8	3.0	25.4	13	25.6
Schlumberger	SLB	450.2 **	7	9378.8	1	8029.6	2	6705.5	6	139.7	6.7	663.9	-11	67.8
Smith International	SII	6.6 **	6	3756.6	4	4546.5	4	220.7	5	126.1	3.0	-3.5	NM	NEG
Tuboscope Vetco International	TUBO	1.3	34	626.3	12	430.7	12	183.3	11	91.0	0.7	-9.9	NM	NEG
Varco International	VRC	9.5	-3	7517.0	2	8076.9	1	191.8	11	152.1	4.9	10.8	NM	87.7
Weatherford International	WII	2.6	-1	893.4	11	1239.0	11	314.7	53	109.6	0.8	29.2	47	8.8
Western Atlas	WAI	94.3	10	6687.9	3	6687.9	3	2006.0	1	142.3	4.7	180.0	9	52.4
Western Co. of North America	WSN	6.5	18	2849.6	7	2023.1	9	358.7	14	157.3	1.8	49.0	862	13.3
10 HEALTH CARE														
INDUSTRY COMPOSITE		**13886.9**	**11**	**18247.8**		**17720.3**		**130896.4**	**5**	**172.0**	**10.6**	**19112.3**	**-18**	**72.7**
(A) DRUGS & RESEARCH														
Group Composite		**10385.2**	**12**	**25155.5**		**29976.5**		**79600.4**	**5**	**192.8**	**13.0**	**13429.8**	**-18**	**77.3**
A. L. Laboratories	BMD	17.3	22	7870.0	32	6530.4	32	338.2	15	153.7	5.1	14.8	-16	116.8
Allergan	AGN	102.5	15	21583.5	19	14968.0	21	858.9	3	180.9	11.9	143.6	9	71.4
ALZA	AZA	53.2 *	2	49307.1	8	21885.7	14	219.8	-7	203.9	24.2	66.0	-37	80.6
American Cyanamid	ACY	595.6	12	22475.5	18	16047.5	19	4276.8	2	161.4	13.9	-112.2	NM	NEG
American Home Products	AHP	662.7	20	12893.0	27	9432.1	30	8304.8	5	161.6	8.0	1992.7	16	33.3
Amgen	AMGN	255.3	40	83302.0	5	68073.2	6	1373.8	26	448.2	18.6	592.4	5	43.1
Biocraft Laboratories (3)	BCL	8.7	-1	12030.6	29	10297.8	28	124.9	35	173.4	6.9	9.1	NM	95.1
Biogen	BGEN	79.3	31	208723.6	2	144799.1	2	136.4	10	359.0	58.1	34.6	-13	229.1
Bristol-Myers Squibb	BMY	1128.0	4	22787.9	17	18635.2	17	11413.0	2	230.6	9.9	2571.0	29	43.9
Carter-Wallace (3)	CAR	49.9	-4	12413.7	28	11333.0	26	656.2	-3	163.2	7.6	68.4	2	73.0
Chiron	CHIR	140.0 *	-2	64263.4	6	73890.6	5	239.8	29	110.0	58.4	23.1	NM	606.5
Coplev Pharmaceutical (1)	CPLY	8.1	-6	19275.5	20	24124.3	13	86.3	66	204.9	9.4	13.8	-31	58.8
Diagnostic Products	DP	12.8	-1	14297.9	23	14698.0	22	106.8	3	119.6	12.0	19.9	-16	64.0
E-Z-EM (5)	EZEMA	7.0	0	7149.6	34	6349.1	33	93.4	6	95.7	7.5	2.3	-58	309.3
Forest Laboratories (3)	FRX	22.1 *	24	18833.5	21	13321.5	23	285.4	19	243.7	7.7	100.7	30	21.9
Genentech	GNE	295.2	9	117594.0	3	98591.1	3	608.2	23	242.3	48.5	58.9	169	501.1
Genetics Institute (11)	GENZ	99.6 *	11	107657.2	4	81525.0	4	102.0	16	110.3	97.6	-16.9	NM	NEG
Genzyme	GENZ	97.3 *	7	56456.5	7	35247.8	8	270.4	23	156.8	36.0	-22.4	NM	NEG
Idexx Laboratories	IDXX	6.9	32	18425.1	22	15332.3	20	93.1	51	248.8	7.4	15.0	115	45.8
Immunex	IMNX	418.8 *	340	535607.1	1	154624.8	1	122.9	105	157.1	340.9	-429.2	NM	NEG
IVAX	IVX	24.1	21	8313.4	31	8932.9	31	645.3	31	222.5	3.7	137.3	129	17.6
Life Technologies	LTEK	14.5	4	10713.3	30	10087.6	29	205.6	4	152.3	7.0	25.9	6	55.9
Lilly (Eli)	LLY	954.6	3	29192.7	12	25557.1	11	6452.4	5	197.3	14.8	701.9	-41	136.0
Marion Merrell Dow	MKC	451.0	-3	45894.0	9	42862.9	7	2818.0	15	286.8	16.0	507.0	-50	89.0
Maxwell Laboratories (7)	MXWL	5.7	-8	7739.7	33	6017.7	34	86.9	-4	119.0	6.5	1.8	NM	322.3
Merck	MRK	1172.8	6	24900.2	15	25002.0	12	10498.2	9	222.9	11.2	3153.0	-13	37.2
Mylan Laboratories (3)	MYL	13.5	72	13041.5	26	12735.8	24	212.0	61	204.4	6.4	97.3	94	13.9
Perrigo (6)	PRGO	5.0	49	1400.7	38	1080.7	38	570.8	39	158.8	0.9	70.1	56	7.2
Pfizer	PFE	974.4	13	24059.2	16	18021.6	18	7477.7	3	184.6	13.0	851.4	-45	114.4

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R&D SCOREBOARD

MPANY	STOCK SYMBOL	R&D EXPENSES						SALES				PROFITS		
		1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
ne-Poulenc Rorer	RPR	588.2	13	26376.7	14	19622.3	16	4019.4	-2	180.2	14.6	594.3	2	99.0
erer (R. P.) (3)	SHR	114	35	4302.5	35	3062.3	35	398.0	18	150.3	2.9	66.3	107	17.2
ering-Plough	SGP	577.6	11	26740.7	13	21427.6	15	4341.3	7	201.0	13.3	1078.4	13	53.6
Pharmaceuticals	SPI	115	47	2124.7	36	1239.6	37	404.0	-15	74.5	2.9	27.1	-49	42.5
etic (6)	SNTC	1.5	0	1419.3	37	2941.3	36	93.7	59	86.0	1.7	10.4	19	14.9
tex (7)	SYN	404.4	8	39262.1	10	30205.5	9	2123.0	3	206.1	19.0	132.7	-76	304.7
ohn	UPJ	642.0	10	34517.9	11	26494.9	10	3653.4	2	196.4	17.6	490.4	-30	130.9
mer-Lambert	WLA	464.9	-2	13282.9	25	12028.3	25	5793.7	4	165.5	8.0	318.5	-63	146.0
ith Laboratories	ZENL	7.9	11	13567.2	24	11153.5	27	96.0	62	165.5	8.2	20.6	NM	38.2
) MEDICAL PRODUCTS & SERVICES														
oup Composite		3501.6	10	10045.4		7384.4		51296.0	5	147.2	6.8	5682.5	-19	61.6
bott Laboratories	ABT	8810	14	17740.5	5	14717.8	5	8407.8	7	169.3	10.5	1943.2	12	45.3
son	ACN	58.3	22	39046.9	1	26245.4	1	295.3	-14	197.7	19.8	3.4	-94	1701.3
AC Laboratories (9)	ADAC	110	12	17317.1	6	16094.6	4	156.9	29	246.4	7.0	19.5	38	56.5
vanced Medical	AMA	9.1	-4	NA	NR	NA	NR	119.4	-7	NA	7.6	-5.5	NM	NEG
vanced Technology Laboratories	ATLI	43.8	14	22174.0	2	16960.7	3	304.5	-6	154.0	14.4	-3.6	NM	NEG
sco International	ASZ	18.6	24	4249.2	33	3669.9	32	502.9	1	115.1	3.7	27.6	-53	67.3
ow International (8)	ARRO	9.6 **	17	6721.4	27	6447.1	24	150.2	13	105.4	6.4	37.2	-1	25.8
d (C. R.)	BCR	66.3	10	7846.1	23	6038.7	26	970.8	-2	114.9	6.8	98.9	-8	67.0
sch & Lomb	BOL	57.9	9	3639.2	35	3578.6	33	1872.2	10	117.7	3.1	242.0	-8	23.9
xter International	BAX	337.0	6	5579.5	29	4597.3	29	8879.0	5	147.0	3.8	-319.0	NM	NEG
ton, Dickinson (9)	BDX	139.1	11	7323.2	25	6140.6	25	2465.4	4	129.8	5.6	222.9	-17	62.4
met (5)	BMET	18.0	8	13747.1	13	10224.4	16	335.4	22	256.2	5.4	94.3	23	19.1
ston Scientific	BSX	20.8	40	8855.7	21	6987.0	23	380.1	21	161.8	5.5	109.5	20	19.0
con	CCON	6.0	-14	7969.6	22	8142.9	20	87.3	5	115.5	6.9	3.0	-68	200.3
oper (10)	COO	3.2	-2	3308.2	36	2993.8	36	92.7	46	95.5	3.5	-33.7	NM	NEG
rdis (6)	CORD	19.1	-1	7206.4	26	7173.4	21	255.5	15	96.4	7.5	38.7	20	49.3
tascope (6)	DSCP	16.7	18	15185.5	8	11118.1	14	166.0	6	150.9	10.1	22.1	108	75.7
ntsply International	XRAY	11.0	1	2470.4	39	861.5	47	552.6	9	124.3	2.0	55.8	-8	19.7
sonics Ultrasound	DIAU	13.1	-1	14715.9	10	14306.9	7	195.4	-5	220.3	6.7	-8.1	NM	NEG
senius USA	FRN	1.5	-3	1363.6	44	1900.8	40	206.0	60	187.2	0.7	4.6	512	32.7
emonetics (3)	HAE	13.6	30	13561.9	14	11168.5	13	216.3	23	215.9	6.3	40.0	44	34.0
althdyne	HDYN	3.7	42	11851	46	841.6	48	260.9	5	84.1	1.4	9.3	NM	39.6
vacare	IVCR	6.8 **	30	2250.0	42	1849.9	42	365.5	20	120.2	1.9	33.5	22	20.4
hnson & Johnson	JNJ	1182.0	5	14485.3	11	11681.6	12	14138.0	3	173.3	8.4	2332.0	6	50.7
ndall International	KEN	113	8	1329.4	45	1254.6	44	816.3	5	96.0	1.4	96.0	NM	11.8
allinckrodt Group (6)	MKG	95.3	5	9530.0	19	8917.2	18	1796.3	5	179.6	5.3	-133.1	NM	NEG
arquette Electronics (4)	MARQA	15.5	14	10375.3	18	9735.2	17	250.2	7	167.3	6.2	26.4	20	58.8
axxim Medical (10)	MAM	2.3	44	1001.3	48	706.7	49	129.7	74	56.9	1.8	8.1	53	28.1
DT (3)	MDTC	4.4	14	3791.1	34	3417.0	35	133.9	12	114.7	3.3	4.2	374	106.0
edex (6)	MDEX	4.3	30	3272.3	37	2490.5	37	92.3	6	71.0	4.6	6.8	-40	62.4
edtronic (4)	MDT	133.0	22	14378.2	12	11750.1	11	1328.2	13	143.6	10.0	313.5	29	42.4
entor (3)	MNTR	7.0	6	7580.6	24	5923.9	27	115.0	29	125.2	6.1	-4.7	NM	NEG
ine Safety Appliances	MNES	21.0	0	4565.2	32	3683.5	31	429.2	-15	93.3	4.9	18.2	-34	115.1
ellcor (6)	NELL	22.7	3	12629.9	16	12338.6	10	218.2	11	121.4	10.4	40.8	19	55.6
ichols Institute	LAB.A	3.9	32	1148.5	47	1056.8	46	279.6	-2	82.2	1.4	-5.5	NM	NEG
EC Medical Systems	OXE	8.7	23	15111.3	9	12789.0	8	100.0	3	173.9	8.7	8.0	-34	108.2
ptical Radiation (7)	ORCO	9.0	92	4995.6	31	3562.4	34	158.0	-1	87.8	5.7	9.3	77	96.9
ritan-Bennett (1)	PBEN	24.9	-4	92174	20	8911.1	19	309.3	3	114.5	8.0	-39.2	NM	NEG
iMed Life Systems (2)	SMLS	17.0	50	12936.1	15	7026.8	22	222.7	21	169.4	7.6	79.7	53	21.4
famor/Danek Group	SDG	11.5	45	18679.7	4	12674.9	9	161.8	34	263.1	7.1	35.1	23	32.8
la Group (3)		10.8	17	1883.8	43	1883.8	41	281.5	9	49.2	3.8	25.0	13	43.1
paceLabs Medical	SLMD	30.6	7	19415.2	3	18530.0	2	248.7	-1	157.9	12.3	30.9	4	99.0
t. Jude Medical	STJM	110	-4	15196.7	7	14365.0	6	252.6	5	349.9	4.3	145.2	6	7.6
ryker	STRY	36.2 **	12	11214.1	17	10449.0	15	557.3	17	172.7	6.5	96.1	25	37.7
unrise Medical (6)	SMD	7.4	26	2814.5	38	2334.7	38	319.2	31	121.6	2.3	29.7	47	24.9
ybron International (9)	SYB	8.7	8	2442.8	40	2150.2	39	395.4	3	111.4	2.2	46.6	29	18.6
ecnol Medical Products (11)	TCNL	1.2	13	749.7	49	1100.3	45	86.7	22	55.1	1.4	21.1	14	5.6

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R&D SCOREBOARD

COMPANY	STOCK SYMBOL	R&D EXPENSES						SALES				PROFITS		
			CHANGE FROM	PER EMPLOYEE					CHANGE FROM		R&D AS %		CHANGE FROM	R&D AS %
		1993 $ MIL.	1992 %	1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	1993 $ MIL.	1992 %	PER EMPLOYEE $ THOUS.	OF SALES	1993 $ MIL.	1992 %	OF PROFIT
Tokos Medical	TKOS	2.4	27	2302.9	41	1844.3	43	120.8	-24	116.2	2.0	-24.4	NM	NEG
U. S. Surgical	USS	50.8	16	6684.2	28	4994.3	28	1037.2	-13	136.5	4.9	-137.4	NM	NEG
Vital Signs (9)	VITL	3.9	30	5446.3	30	4580.1	30	79.9	22	112.8	4.8	18.6	22	20.8
11 HOUSING														
INDUSTRY COMPOSITE		**494.7**	**2**	**2743.6**		**3099.7**		**28192.5**	**4**	**156.4**	**1.8**	**2221.7**	**91**	**22.3**
Ameron (11)	AMN	4.1	3	1429.6	14	1187.7	15	453.4	2	158.1	0.9	-34.0	NM	NEG
ASI Holding		43.0	8	1194.4	16	1143.8	16	3830.5	1	106.4	1.1	-66.5	NM	NEG
Green (A. P.) Industries	APGI	2.2	-8	1520.4	13	1467.7	12	163.0	-3	112.6	1.4	9.4	NM	23.4
Guardsman Products	GPI	5.9	7	6897.7	4	6475.6	3	177.8	17	206.8	3.3	7.0	109	84.6
Lafarge	LAF	7.3	-10	986.5	19	993.9	18	1494.5	-1	202.0	0.5	27.5	NM	26.6
Lilly Industries (11)	LICIA	12.3	12	10489.4	1	9207.3	1	284.3	20	242.0	4.3	27.9	28	44.1
Martin Marietta Materials	MLM	2.3	-2	756.3	22	756.3	22	452.9	11	151.0	0.5	74.1	31	3.1
Mestek	MCC	1.2	-13	724.6	23	432.2	23	231.4	22	140.7	0.5	12.7	56	9.4
Moore (Benjamin)	MBEN	14.0 **	13	7129.5	3	5946.9	5	512.0	6	260.9	2.7	61.0	1	23.0
Owens-Corning Fiberglas	OCF	61.0	11	3765.4	9	2885.3	9	2944.0	2	181.7	2.1	152.0	45	40.1
PPG Industries	PPG	201.2	-1	6407.6	5	6398.5	4	5753.9	-1	183.2	3.5	544.1	0	37.0
Pratt & Lambert	PM	7.2	2	5080.7	6	4435.2	7	241.8	3	169.7	3.0	10.2	17	70.9
RPM (5)	RPOW	9.5	9	2701.4	10	2695.1	10	625.7	13	178.8	1.5	66.1	15	14.3
Scotsman Industries	SCT	3.9	11	4262.3	8	3034.4	8	164.0	-3	179.2	2.4	13.4	31	29.2
Sherwin-Williams	SHW	17.2	10	997.0	18	1057.7	17	2949.3	7	171.1	0.6	264.4	17	6.5
Tecumseh Products	TECUA	24.9	-8	1976.2	12	1902.7	11	1314.2	4	104.3	1.9	127.8	45	19.5
TJ International	TJCO	2.8	-30	766.1	21	796.3	21	551.2	38	153.1	0.5	30.1	NM	9.1
Tokheim (11)	TOK	8.6 **	-18	4639.6	7	5312.1	6	172.3	6	92.7	5.0	-5.7	NM	NEG
U. S. Filter (3)	USF	1.8	224	2683.3	11	868.5	20	101.4	146	148.7	1.8	4.3	NM	42.6
USG	USG	14.0	0	1176.5	17	1194.5	14	1916.0	8	161.0	0.7	578.0	NM	2.4
Valspar (10)	VAL	24.6	-1	9780.7	2	8808.6	2	693.7	2	276.0	3.5	65.6	15	37.5
Vulcan Materials	VMC	6.1	12	964.0	20	880.1	19	1133.5	5	179.9	0.5	125.2	-4	4.9
York International	YRK	19.6	9	1420.3	15	1375.4	13	2031.9	5	147.2	1.0	127.2	3	15.4
12 LEISURE TIME PRODUCTS														
INDUSTRY COMPOSITE		**1891.5**	**-3**	**8087.1**		**5103.5**		**35297.8**	**4**	**150.9**	**5.4**	**1731.9**	**-27**	**109.2**
Anthony Industries	ANT	4.3	21	1159.5	22	962.5	24	431.6	7	116.7	1.0	17.0	31	25.3
Arctco (3)	ACAT	3.4 **	35	3784.4	11	3056.0	14	184.7	25	205.2	1.8	26.9	37	12.7
Avid Technology	AVID	13.2	124	32458.3	1	28383.5	1	112.9	117	276.6	11.7	4.6	27	290.0
Bell Sports (6)	BSPT	2.1	125	3062.7	17	2263.7	18	82.6	28	120.4	2.5	10.7	55	19.7
Brunswick	BC	60.8	17	3377.8	15	2934.6	15	2206.8	7	122.6	2.8	86.5	40	70.3
Callaway Golf	ELY	3.7	130	3410.8	14	2647.3	16	254.6	93	237.8	1.4	69.6	110	5.2
Coachmen Industries	COA	2.0	-3	809.3	24	1136.8	22	329.5	13	132.5	0.6	12.7	54	15.8
Eastman Kodak	EK	1301.0	-8	11784.4	4	10790.0	4	16364.0	-1	148.2	8.0	856.0	-30	152.0
Escalade	ESCA	1.5	50	1875.0	21	1137.7	21	94.7	4	118.4	1.6	5.1	NM	29.3
Fleetwood Enterprises (4)	FLE	14.7 **	15	1050.0	23	1073.5	23	1941.9	22	138.7	0.8	91.3	42	16.1
Galoob (Lewis) Toys	GAL	7.5	9	31978.5	2	25544.8	2	134.3	19	576.5	5.5	-10.9	NM	NEG
Harley-Davidson	HDI	22.7	29	3783.3	12	2500.3	17	1217.4	10	202.9	1.9	66.5	-25	34.1
Harman International Industries (6)	HAR	12.0 **	12	2543.5	19	2044.5	20	664.9	10	141.2	1.8	18.6	215	64.5
Hasbro	HAS	125.6 **	15	10045.3	5	8560.8	5	2747.2	8	219.8	4.6	325.2	11	38.6
Johnson Worldwide Associates (9)	JWAIA	5.2	7	3809.5	10	3331.1	13	280.3	2	205.3	1.9	2.7	-73	193.0
Lumex	LUM	4.7	23	3951.1	9	3826.7	10	109.0	5	91.9	4.3	-0.8	NM	NEG
Mattel	MAT	75.4	-2	3591.2	13	3673.4	12	2704.4	6	128.8	2.8	236.6	-16	31.9
Outboard Marine (9)	OM	36.0	0	4459.3	8	4305.3	8	1034.6	-3	128.2	3.5	-159.9	NM	NEG
Polaroid	PRD	160.8 **	4	13346.6	3	12547.3	3	2244.9	4	186.3	7.2	101.7	-38	158.1
Quixote (6)	QUIX	3.1	-8	2667.8	18	3947.4	9	145.1	12	125.5	2.1	17.3	11	17.9
Revell-Monogram	RVL	3.5	32	5665.0	7	4350.8	7	96.4	-8	156.0	3.6	-1.8	NM	NEG
Roadmaster Industries	RDM	1.1	12	277.2	26	399.2	26	312.2	38	80.0	0.3	11.7	57	9.3
SLM International	SLMI	4.6	49	2015.4	20	2058.7	19	314.7	36	138.4	1.5	13.0	-41	35.4
Tyco Toys	TTI	19.1	26	6807.9	6	5568.8	6	730.2	-5	260.8	2.6	-83.3	NM	NEG
Video Lottery Technologies	VLTS	2.6	3	3254.3	16	3761.8	11	174.6	58	215.6	1.5	7.5	-39	35.2
Winnebago Industries (8)	WGO	1.1	41	388.8	25	709.9	25	384.1	30	138.7	0.3	7.7	NM	14.0

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R&D SCOREBOARD

MPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
MANUFACTURING														
USTRY COMPOSITE		3931.1	5	4314.7		4224.3		132573.1	5	145.5	3.0	7893.3	27	49.8
GENERAL MANUFACTURING														
up Composite		1783.9	5	4762.8		2576.2		52647.2	4	140.6	3.4	4053.5	-10	44.0
nt Techsystems (3)	ATK	178	-28	3950.9	13	4173.3	11	1005.3	-15	223.4	1.8	-70.3	NM	NEG
erican Filtrona	AFIL	2.9 **	1	2409.2	29	3273.4	17	130.9	7	109.1	2.2	10.5	8	27.6
arGroup	ATR	129	36	4022.5	12	4022.5	12	411.5	11	128.6	3.1	35.5	8	36.2
ry Dennison	AVY	45.5	-3	2888.9	23	2852.9	20	2608.7	-1	165.6	1.7	132.2	2	34.4
y Gaming International	BGII	7.8	11	8666.7	2	7900.0	3	164.6	3	182.9	4.7	-23.0	NM	NEG
	BIC	3.3	2	1300.4	44	1556.4	38	439.3	5	175.7	0.7	74.0	10	4.4
sings	BCO	17	12	2642.9	24	2216.4	28	129.6	7	205.7	1.3	15.5	10	10.7
dy (W. H.) (7)	BRCOA	12.1	21	6740.0	5	4757.5	7	243.0	3	135.0	5.0	25.8	68	47.0
lisle	CSL	112	4	2514.6	26	2572.2	22	611.3	16	137.7	1.8	46.9	18	23.8
tral Sprinkler (10)	CNSP	2.8	4	5354.7	8	5085.6	6	82.5	36	155.6	3.4	3.2	351	89.4
rt Industries	CTI	5.2 *	35	6851.1	4	8137.0	2	83.7	-20	110.3	6.2	1.3	-88	396.3
ning	GLW	173.1	15	4415.8	11	4374.0	10	4034.7	8	102.9	4.3	36.7	-90	471.7
ne	CR	18.3 **	-5	2103.4	35	1894.9	34	1310.2	0	150.6	1.4	79.8	106	22.9
ss (A. T.)	ATX.A	2.2	79	1702.3	39	872.8	49	164.6	-12	126.6	1.3	1.6	-91	136.8
nelly (6)	DON	15.9	12	6027.7	6	5483.7	5	300.9	11	114.2	5.3	11.6	7	137.3
acell International (6)	DUR	26.1	24	3389.6	18	2260.7	26	1742.2	8	226.3	1.5	182.8	-13	14.3
gle Industries		3.1	-9	329.8	56	543.0	54	1142.3	4	121.5	0.3	-80.0	NM	NEG
> Industries (6)	ELCN	2.3	5	1254.8	48	1138.8	43	199.2	5	108.7	1.2	8.6	NM	26.8
rirodyne Industries	EDYNQ	15.2	23	3105.3	20	2502.9	23	587.4	2	119.9	2.6	-86.9	NM	NEG
ef (9)	ESSF	2.6 **	17	3594.7	16	3276.3	16	104.5	5	145.5	2.5	6.7	-14	38.5
rchild (6)	FA	3.3	-21	906.1	51	844.5	50	463.6	-5	128.8	0.7	-52.4	NM	NEG
t Brands (6)	FBR	8.0	-13	2146.4	33	2400.3	24	1041.9	5	277.8	0.8	89.1	34	9.0
mex International	FMXI	2.1	24	388.9	54	388.9	56	695.8	39	128.9	0.3	11.0	NM	NEG
on (1)	FCBN	6.1 **	-3	3025.8	22	2324.2	25	285.2	-5	141.4	2.1	13.0	4	47.1
ndle Environmental Systems (3)	GUN	1.1	20	1873.5	37	1338.1	41	115.3	-12	202.7	0.9	1.5	-89	72.3
rsco	HSC	5.2	13	363.9	55	418.4	55	1422.3	-12	100.2	0.4	137.2	-2	3.8
xcel	HXL	8.7	-16	3737.2	14	3399.7	14	338.6	-12	144.7	2.6	-80.3	NM	NEG
lenbrand Industries (11)	HB	30.4	8	3097.9	21	2605.1	21	1447.9	11	147.7	2.1	221.5	25	13.7
nois Tool Works	ITW	47.2	11	2484.2	27	2257.4	27	3159.2	12	166.3	1.5	335.9	8	14.1
trument Systems (9)	ISY	3.6	25	1285.7	46	925.9	48	436.9	10	156.1	0.8	44.3	23	8.1
ernational Game Technology (9)	IGT	16.5	40	7868.1	3	4754.4	8	478.0	31	227.6	3.5	174.1	66	9.5
ape & Vogt Mfg. (6)	KNAP	1.6	43	1491.8	42	963.2	47	123.4	-1	112.0	1.3	8.6	-16	19.2
ar Holdings (6)		18.2	60	1691.8	40	984.3	46	1756.5	23	163.0	1.0	28.4	NM	64.1
dall	LDL	4.7	0	4978.8	9	4437.0	9	157.4	4	166.8	3.0	16.9	16	27.8
ark Controls	MRCC	1.4	-4	1795.7	38	2086.6	32	87.8	2	112.1	1.6	5.1	-15	27.6
ark IV Industries (2)	IV	28.6	3	2425.4	28	2091.9	30	1222.0	7	103.6	2.3	70.1	49	40.8
aterial Sciences (2)	MSC	3.1	9	4543.7	10	3290.2	15	156.2	10	231.5	2.0	14.1	21	21.7
innesota Mining & Mfg.	MMM	1030.0	2	11953.4	1	10492.4	1	14020.0	1	162.7	7.3	2002.0	3	51.4
u-kote Holding (3)	NKOT	1.4	24	1290.0	45	1621.6	36	120.1	26	109.2	1.2	15.1	61	9.4
'Sullivan	OSL	2.1	35	759.3	52	638.7	52	292.3	34	104.4	0.7	16.8	-4	12.7
il-Dri Corp. of America (7)	ODC	1.5	4	2303.8	31	1924.4	33	134.8	13	205.7	1.1	12.3	33	12.3
arker Hannifin (6)	PH	32.3	54	1258.4	47	1026.8	45	2489.3	5	97.1	1.3	108.1	3	29.9
enn Engineering & Mfg.	PNN	1.2	1	1151.8	49	1134.3	44	100.7	14	99.9	1.2	11.5	9	10.1
astic Containers		9.6 **	-8	5801.5	7	6334.7	4	207.0	3	124.9	4.6	-8.2	NM	NEG
ubbermaid	RBD	28.2	9	2354.5	30	2088.6	31	1960.2	9	163.7	1.4	341.9	28	8.3
ealed Air	SEE	9.2	-3	3333.8	19	3176.3	18	451.7	1	164.3	2.0	45.5	17	20.2
PS Technologies	ST	5.1	-24	1372.7	43	1381.2	40	319.1	-11	86.7	1.6	-33.6	NM	NEG
turm, Ruger	RGR	1.7	42	988.9	50	710.4	51	194.2	24	113.0	0.9	56.0	51	3.0
edegar Industries	TG	9.1	82	2611.7	25	1476.7	39	449.2	1	128.3	2.0	6.9	-57	132.0
inova	TNV	55.3 **	-15	3684.7	15	3880.7	13	1643.8	-3	109.5	3.4	17.1	-29	323.3
niroyal Technology (9)	UTCI	2.9	25	2255.4	32	2112.6	29	173.4	5	133.4	1.7	-2.8	NM	NEG
almont Industries	VALM	2.7	4	677.7	53	545.0	53	438.8	3	110.1	0.6	8.1	-45	33.3
Vahlco Environmental Systems	WAL	1.6	57	1926.3	36	1597.7	37	82.1	0	100.9	1.9	-17.0	NM	NEG
Vhittaker (10)	WKR	1.7	55	2125.0	34	1750.8	35	115.4	-28	144.2	1.5	12.5	-43	13.6
VMS Industries (6)	WMS	13.8	34	3565.3	17	2973.3	19	331.1	46	85.7	4.2	49.7	96	27.7
Vyman-Gordon	WYMN	2.8	-8	1499.2	41	1323.4	42	239.8	-20	129.4	1.2	-17.0	NM	NEG

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R&D SCOREBOARD

COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	R&D EXPENSES CHANGE FROM 1992 %	R&D EXPENSES PER EMPLOYEE 1993 $	R&D EXPENSES PER EMPLOYEE 1993 RANK	R&D EXPENSES PER EMPLOYEE AVG. 1989-93 $	R&D EXPENSES PER EMPLOYEE AVG. 1989-93 RANK	SALES 1993 $ MIL.	SALES CHANGE FROM 1992 %	SALES PER EMPLOYEE $ THOUS.	SALES R&D AS % OF SALES	PROFITS 1993 $ MIL.	PROFITS CHANGE FROM 1992 %	PROFITS R& AS (PRC
(B) MACHINE & HAND TOOLS														
Group Composite		313.9	3	2444.8		2479.2		16138.3	4	125.7	1.9	598.3	53	52
Acme-Cleveland (9)	AMT	3.0	12	1541.9	15	1005.1	17	174.9	−2	89.8	1.7	10.0	54	29
Best Lock		2.2	11	1873.2	14	1316.2	15	98.5	16	82.2	2.3	2.0	−48	11
Black & Decker	BDK	93.0	−3	2493.3	10	2166.7	11	4882.2	2	130.9	1.9	155.9	NM	59
Blount (2)	BLT A	7.0	1	1489.4	16	1756.2	14	487.3	14	103.7	1.4	36.3	100	19
Brown & Sharpe Mfg.	BNS	8.7	−20	5618.3	1	5195.6	1	157.0	−2	101.8	5.5	−1.4	NM	NE
Cascade (1)	CASC	3.7 **	27	4391.4	4	2820.6	7	141.3	−5	168.6	2.6	9.0	−24	4
Cincinnati Milacron	CMZ	41.9	23	4972.1	2	5001.5	2	1029.4	30	122.2	4.1	37.2	NM	NE
Giddings & Lewis	GIDL	4.1	6	1112.8	18	670.9	19	517.5	17	141.7	0.8	70.0	52	5
Gleason	GLE	5.1	−34	4853.2	3	3682.8	3	103.9	−29	99.0	4.9	−4.0	NM	NE
Hyster-Yale Materials Handling		20.7 **	−5	4140.0	5	3658.2	4	908.2	5	181.6	2.3	−1.7	NM	NE
Kennametal (6)	KMT	14.7	8	3033.8	8	2624.8	9	598.5	1	123.4	2.5	34.1	63	43
Lincoln Electric	LIEL	17.8	−14	2942.7	9	3001.6	6	846.0	−1	140.2	2.1	−47.0	NM	NE
Monarch Machine Tool	MMO	1.4	2	2075.0	12	1920.3	13	77.5	0	114.0	1.8	−1.7	NM	NE
Nacco Industries	NC	23.4	−4	2150.9	11	1991.7	12	1549.4	4	142.4	1.5	24.7	−39	94
Raymond	RAYM	4.3	66	3557.3	6	3296.2	5	169.5	16	141.8	2.5	8.2	24	51
Snap-on	SNA	27.7 **	31	3077.8	7	2358.5	10	1193.1	15	132.6	2.3	136.5	25	20
SPX	SPW	17.6	19	2042.9	13	2626.7	8	756.1	−6	87.9	2.3	44.7	31	39
Stanley Works	SWK	14.6	−4	768.9	19	802.0	18	2273.1	4	119.7	0.6	148.0	−6	9
Starrett (L. S.) (6)	SCX	3.1	−15	1246.8	17	1208.2	16	174.8	−3	69.8	1.8	11.9	−20	26
(C) SPECIAL MACHINERY														
Group Composite		1769.3	6	4840.2		6615.4		59418.3	6	162.6	3.0	2953.3	122	59.
AGCO	AG	7.5 **	8	3107.2	31	4498.4	25	595.7	89	246.5	1.3	34.1	464	22.
Alamo Group	ALMO	1.2	16	1138.5	54	1268.7	52	88.5	13	85.1	1.3	12.2	23	9.
Applied Materials (10)	AMAT	140.2 **	28	29576.1	2	28668.6	3	1080.0	44	227.9	13.0	150.4	155	93.
Applied Power (8)	APW	5.7	9	2044.3	44	1884.0	45	360.5	1	129.9	1.6	13.4	−16	42.
Astec Industries	ASTE	2.9	13	2466.7	39	2227.1	42	172.8	16	145.8	1.7	9.8	52	29
Baldwin Technology (6)	BLD	6.5	−5	6098.9	20	4796.3	24	215.8	−3	203.2	3.0	8.0	−4	81
B-E Holdings		6.9	−6	7381.9	15	4856.8	23	198.5	−18	211.1	3.5	−39.8	NM	NE
Binks Mfg. (11)	BIN	4.8	14	2940.4	33	2076.4	43	210.4	−6	127.9	2.3	2.0	34	245
Briggs & Stratton (6)	BGG	10.4	−4	1309.6	52	1213.4	53	1139.5	9	143.3	0.9	114.4	43	9.
BWIP Holding	BWIP	4.2	−32	1352.7	51	1855.9	46	427.2	7	137.6	1.0	26.4	−57	15
Camco International	CAM	19.8	−27	4385.8	25	4385.8	27	586.3	17	129.9	3.4	28.0	NM	70
Caterpillar	CAT	319.0	3	6224.4	19	5073.2	21	11615.0	14	226.6	2.7	723.0	NM	44
Clark Equipment	CKL	19.8 **	17	3328.8	29	3084.2	30	874.9	9	147.1	2.3	54.3	NM	36.
CMI	CMX	4.5 **	24	4988.9	23	5516.5	19	100.6	24	111.7	4.5	8.3	279	53.
Commercial Intertech (10)	TEC	6.7	−17	1803.2	47	1768.3	48	448.6	0	120.6	1.5	20.6	−12	32.
Deere (10)	DE	269.8 **	−6	8158.4	14	7405.1	13	7653.5	11	231.4	3.5	281.6	441	95.
Dover	DOV	60.4	−11	2955.7	32	3102.1	29	2483.9	9	121.5	2.4	245.5	23	24.
Dresser Industries (10)	DI	81.5	641	3143.6	30	939.7	56	4216.0	11	162.6	1.9	251.1	75	32.
Duriron	DURI	6.0	9	2508.3	38	2408.6	37	313.9	5	130.8	1.9	26.4	28	22.
Electroglas	EGLS	8.8 **	6	20379.1	6	20445.7	6	79.4	44	184.7	11.0	17.1	143	51.
Esterline Technologies (10)	ESL	14.0 **	4	5002.5	22	4448.0	26	285.2	−6	101.8	4.9	−38.0	NM	NE
Farr	FARC	2.0 **	−20	1655.6	50	2292.6	39	112.4	0	90.8	1.8	2.2	NM	94
Flow International (4)	FLOW	5.0 **	8	9227.8	12	12000.5	10	79.1	14	146.4	6.3	5.8	36	86.
FMC	FMC	149.2	3	7211.2	16	6478.8	14	3753.9	−6	181.4	4.0	40.3	−86	370.
FSI International (8)	FSII	11.6	19	28964.9	3	25669.2	5	77.0	64	192.9	15.0	3.5	NM	325.
Gehl	GEHL	1.0	−38	1101.5	56	1432.3	50	137.2	6	145.1	0.8	0.4	NM	284.
General Signal	GSX	63.7	−33	4939.9	24	5721.4	17	1530.0	−9	118.6	4.2	94.4	402	67.
Gerber Scientific (4)	GRB	21.7	−2	14494.0	9	13977.4	8	254.4	2	169.6	8.5	12.2	8	177.
Goulds Pumps	GULD	7.2	−9	1756.1	48	1521.4	49	555.7	−1	135.5	1.3	34.4	−4	20.
Graco	GGG	12.4	17	5952.9	21	5383.0	20	322.6	1	155.1	3.8	13.8	−24	89.
Harnischfeger Industries (10)	HPH	25.4	−5	2352.9	41	2042.0	44	1243.1	−11	115.1	2.0	−27.0	NM	NEG
Indresco (10)	ID	3.0	3	966.8	58	858.2	57	538.1	−4	173.4	0.6	1.1	NM	27.0
Ingersoll-Rand	IR	150.1 **	8	4271.1	26	3907.1	28	4021.1	6	114.4	3.7	265.1	79	56.6
Interlake	IK	3.2	15	702.5	60	784.8	58	681.3	−4	147.5	0.5	−16.2	NM	NEG
Ionics	ION	3.7	19	2829.2	36	2740.0	34	175.3	13	134.8	2.1	19.7	8	18.6
JLG Industries (7)	JLGI	3.4 **	−7	2556.6	37	2656.3	35	123.0	11	92.9	2.8	4.6	NM	73.0

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R&D SCOREBOARD

PANY	STOCK SYMBOL	R&D EXPENSES						SALES				PROFITS		
		1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
chnologies (2)	JOY	3.9	28	1009.5	57	588.8	60	581.1	−6	149.0	0.7	−5.0	NM	NEG
ndustries	KT	2.6	−28	1725.1	49	1080.3	54	168.7	−5	112.0	1.5	6.0	70	43.5
ech	KWND	2.0	−64	2360.9	40	4926.4	22	236.4	13	275.2	0.9	−18.1	NM	NEG
e & Soffa Industries (9)	KLIC	15.9	15	15393.2	7	12965.3	9	140.9	48	136.1	11.3	12.1	NM	131.8
esearch (6)	LRCX	43.9	29	26761.0	4	31517.9	2	265.0	55	161.6	16.6	27.0	98	162.5
ıy Mfg. (8)	LINZ	1.0 **	7	2152.3	43	1781.9	47	102.1	−6	210.0	1.0	15.7	−1	6.7
owoc (6)	MTW	2.2	−38	1227.2	53	1328.2	51	278.6	13	154.8	0.8	8.9	−23	24.7
test (8)	MEGT	12.2 **	10	26303.9	5	26000.8	4	78.4	20	169.0	15.6	6.0	43	204.6
or (10)	NEWC	9.9 **	63	13282.5	10	10310.5	12	115.1	27	154.1	8.6	7.2	11	137.0
son (10)	NDSN	19.7	7	6336.2	18	6305.4	15	461.6	8	148.8	4.3	62.2	2	31.6
llus Systems	NVLS	16.9	37	45444.7	1	38764.1	1	113.5	63	306.0	14.8	24.8	163	68.0
nics	OSM	6.8 **	15	8525.7	13	5657.6	18	89.0	6	111.7	7.6	10.8	94	63.0
ir	PNTA	9.3	−1	1123.1	55	1051.9	55	1328.2	7	160.0	0.7	77.4	6	12.0
r Industries (10)	ROPR	3.0	170	3736.0	27	2479.6	36	132.5	90	165.0	2.3	28.4	278	10.6
n Valley Group (9)	SVGI	26.3 **	−3	15362.9	8	15878.2	7	240.6	25	140.4	10.9	6.9	342	380.5
ns Graphics	SVG.A	1.5	10	2836.2	35	3051.3	31	103.8	23	197.6	1.4	2.9	NM	51.9
ant	TANT	11.4 **	−4	6704.7	17	5816.9	16	221.0	3	129.5	5.2	12.9	−28	88.5
no Fibertek	TFT	3.2	20	2872.7	34	2974.1	32	138.1	9	124.6	2.3	14.3	0	22.3
en	TKR	37.1	11	2323.7	42	2282.8	40	1708.8	4	106.9	2.2	−20.9	NM	NEG
Disc (6)	TDI	2.1	6	19111	46	22479	41	139.4	2	125.1	1.5	4.0	117	52.9
International (6)	TYC	19.4	23	809.8	59	678.4	59	3114.5	2	129.8	0.6	128.9	−2	15.1
y (1)	VAT	48.5	17	3699.5	28	2339.7	38	2725.8	19	207.9	1.8	88.9	98	54.6
atley TXT (2)	WTXT	2.3 **	23	1985.1	45	2967.2	33	97.5	32	85.5	2.3	10.6	51	21.3
a Technologies	ZBRA	4.6	36	12155.3	11	11824.6	11	87.5	49	230.1	5.3	28.5	60	16.2
TEXTILES														
up Composite		64.0	9	1502.0		2185.3		4369.4	4	102.5	1.5	288.2	NM	22.2
ny International	AIN	17.6	5	3330.5	2	3090.9	2	555.1	−3	105.0	3.2	25.5	852	68.9
ngton Industries (9)	BUR	12.8	23	541.7	8	463.8	8	2057.9	0	87.2	0.6	144.2	NM	8.9
ord Fabrics (8)	CIS	3.6	9	5255.5	1	4184.7	1	197.0	−2	287.7	1.8	7.8	NM	46.4
vn Crafts (3)	CRW	3.5	52	19869	6	13972	6	151.3	23	86.4	2.3	11.2	12	31.0
Industries (11)	FIT	3.8	5	2124.4	5	1885.4	5	189.6	0	105.3	2.0	25.5	−1	15.0
ord Mills (9)	GFD	14.8	8	3260.6	3	2360.9	3	654.4	6	144.2	2.3	43.9	29	33.8
land (6)	MSLD	6.4	15	2141.0	4	2141.0	4	353.5	48	117.8	1.8	22.0	226	29.2
hetic Industries (9)		1.5	7	766.1	7	763.3	7	210.5	8	107.5	0.7	8.1	0	18.4
METALS & MINING														
USTRY COMPOSITE		360.6	−21	1541.5		1681.7		42017.1	0	179.6	0.9	−1665.7	NM	NEG
ALUMINUM														
up Composite		213.4	−26	1654.7		1660.4		20422.6	−6	158.4	1.0	−930.5	NM	NEG
nax	AMX	10.0	−7	714.3	5	714.3	5	2347.3	−3	167.7	0.4	−186.6	NM	NEG
minum Co. of America	AA	130.4	−39	2056.8	1	3140.3	1	9055.9	−5	142.8	1.4	191.1	−36	68.2
ıer Aluminum	KLU	18.5	37	1844.7	2	1374.1	2	1719.1	−10	171.4	1.1	−208.5	NM	NEG
xxam	MXM	18.5	37	1475.3	3	1046.5	4	2031.1	−8	162.0	0.9	−211.4	NM	NEG
nolds Metals	RLM	36.0	−5	1241.4	4	1212.9	3	5269.2	−6	181.7	0.7	−515.1	NM	NEG
STEEL														
oup Composite		103.2	−18	1382.0		1803.6		17058.2	8	228.4	0.6	−1010.8	NM	NEG
gheny Ludlum	ALS	9.2	−8	1503.3	4	1559.7	4	1100.2	6	180.4	0.8	119.0	51	7.7
nco	AS	16.8	50	2545.5	3	2568.5	3	1664.0	−1	252.1	1.0	−263.5	NM	NEG
hlehem Steel	BS	23.9	−11	1154.6	5	1056.6	5	4323.4	8	208.9	0.6	−351.3	NM	NEG
penter Technology (6)	CRS	12.9	−8	3864.6	2	3032.7	2	576.2	1	172.6	2.2	42.8	88	30.1
ynes International (9)		3.6	−7	40212	1	41274	1	162.5	−4	181.3	2.2	−11.7	NM	NEG
tional Steel	NS	9.4	−1	990.5	7	685.3	8	2418.8	2	254.9	0.4	−279.9	NM	NEG
X–U. S. Steel Group	X	22.0	4	1022.0	6	948.7	6	5612.0	14	260.7	0.4	210.0	NM	NEG
irton Steel	WS	5.4	16	901.1	8	914.8	7	1201.1	11	199.3	0.5	−56.2	NM	NEG
OTHER METALS														
oup Composite		44.0	3	1453.2		1576.2		4536.3	−2	149.9	1.0	275.7	−43	16.0
lden	BWC	5.8	21	2124.5	3	1951.2	2	383.7	5	140.5	1.5	53.9	15	10.8
sh Wellman	BW	7.1	−2	3949.5	1	3579.0	1	295.5	11	163.9	2.4	7.7	−44	92.4
avo	DRV	2.3	11	1589.7	6	996.2	7	277.6	2	196.0	0.8	10.5	−18	21.5
tema (2)	KTM	3.6	414	2400.0	2	1612.3	5	155.3	−7	103.5	2.3	−5.5	NM	NEG

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R&D SCOREBOARD

COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	PER EMPLOYEE 1993 RANK	PER EMPLOYEE AVG. 1989-93 $	PER EMPLOYEE AVG. 1989-93 RANK	SALES 1993 $ MIL.	SALES CHANGE FROM 1992 %	SALES PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	PROFITS CHANGE FROM 1992 %	R& AS % OF PRO
Nord Resources	NRD	11	4	606.8	9	512.9	9	88.4	-12	50.1	1.2	-11.1	NM	NE
Phelps Dodge	PD	16.3 *	-9	1101.4	7	1184.8	6	2595.9	1	175.4	0.6	293.8	-29	5
Precision Castparts (3)	PCP	4.3	-17	990.6	8	802.6	8	461.4	-21	106.3	0.9	-0.3	NM	NE
RMI Titanium	RTI	1.5	-6	1827.0	5	1950.7	3	127.4	-6	150.9	1.2	-12.0	NM	NE
Tremont	TRE	2.0	0	1869.2	4	1882.5	4	151.2	-2	141.3	1.3	-61.4	NM	NE
15 OFFICE EQUIPMENT & SERVICES														
INDUSTRY COMPOSITE		17212.6	1	15739.5		16724.4		216070.6	7	197.4	8.0	-3037.3	NM	NE
(A) BUSINESS MACHINES & SERVICES														
Group Composite		277.4	8	3294.7		4180.7		10189.0	5	121.0	2.7	902.5	-5	30
Anacomp (9)	AAC	5.4	56	1199.6	15	962.2	13	590.2	-6	131.2	0.9	22.9	-35	23
Bell & Howell		18.6	0	3252.9	8	3240.7	8	675.6	1	118.1	2.8	-150.1	NM	NE
Day Runner	DAYR	2.0	26	3702.4	7	2813.0	9	81.9	15	154.2	2.4	8.9	18	22
Diebold	DBD	25.5	4	6066.9	4	4709.2	5	623.3	15	148.3	4.1	74.8	30	34
General Binding	GBND	4.9	41	1547.0	12	925.2	14	376.1	2	117.6	1.3	24.3	-11	20
HON Industries	HONI	7.7 **	31	1226.0	14	785.9	15	780.3	10	124.7	1.0	70.9	14	10
Hunt Mfg. (11)	HUN	1.7	9	781.2	16	669.8	16	256.2	9	120.8	0.6	24.0	11	6
Miller (Herman) (5)	MLHR	22.4	10	3730.2	6	3437.9	6	855.7	6	142.5	2.6	42.4	NM	52
PAR Technology	PTC	5.5	-14	6703.4	3	6494.9	3	81.2	11	99.6	6.7	4.0	11	137
Pitney Bowes	PBI	99.0	-3	3041.5	9	3371.2	7	3542.9	3	108.9	2.8	574.8	16	17
Pyxis	PYXS	1.7	93	5262.3	5	5081.2	4	100.2	117	309.2	1.7	43.3	187	3
Reynolds & Reynolds (9)	REY	12.4	29	2200.1	11	2086.4	11	697.0	8	123.7	1.8	89.3	39	13
Smith Corona (6)	SCO	10.1	-9	2960.0	10	2631.7	10	309.1	-17	90.9	3.3	-13.9	NM	NE
Standard Register	SREG	7.8 **	-1	1344.1	13	1414.5	12	722.1	2	125.2	1.1	70.2	14	11
Telxon (3)	TLXN	17.8 **	47	12578.1	2	9656.0	2	238.4	11	168.5	7.5	-15.7	NM	NE
VeriFone	VFIC	35.1	20	20036.0	1	18040.5	1	258.9	14	148.0	13.5	32.4	-3	108
(B) COMPUTER COMMUNICATIONS														
Group Composite		613.8	42	27564.7		25682.1		5618.0	47	250.4	10.9	904.6	108	67
Adaptec (3)	ADPT	26.3	50	20003.0	17	18240.0	18	311.3	107	236.6	8.5	65.9	238	40
Cabletron Systems (2)	CS	41.8	51	15933.3	20	13001.6	21	418.2	44	159.3	10.0	129.9	41	32
Chipcom	CHPM	19.7	62	34698.4	6	32691.5	5	150.0	72	264.6	13.1	22.7	72	86
Cirrus Logic (3)	CRUS	72.7	74	53711.0	2	45876.9	3	354.8	63	262.2	20.5	32.9	29	221
Cisco Systems (7)	CSCO	44.3	65	30499.0	11	27557.1	6	649.0	91	447.3	6.8	275.1	102	16
Data Switch	DASW	12.5	1	26077.2	14	18911.1	16	95.1	13	198.5	13.1	-2.1	NM	NE
Digi International (9)	DGII	5.2	4	15576.6	21	18004.4	19	93.4	32	280.4	5.6	22.5	23	23
Dynatech (3)	DYTC	54.3	5	17551.6	18	15615.1	20	528.0	9	170.8	10.3	29.3	25	184
Electronics for Imaging	EFII	8.2 *	2	47578.0	4	54951.8	2	89.5	67	517.5	9.2	20.6	135	40
Emulex (6)	EMLX	16.8 **	28	32219.2	9	21763.7	15	107.2	6	206.1	15.6	3.5	-63	485
MB Communications (3)	MCBX	7.9 **	-3	8417.7	22	8417.7	22	189.4	12	202.4	4.2	14.2	NM	55
Network Equipment Technologies (3)	NWK	36.1	11	32334.8	8	26389.2	8	218.8	21	195.9	16.5	-11.1	NM	NE
Network General (3)	NETG	11.1	72	27287.5	13	24280.3	14	83.3	32	204.7	13.3	15.2	17	72
Network Systems	NSCO	27.8	11	17362.1	19	18498.0	17	215.6	-2	134.8	12.9	1.5	NM	1867
Norand (8)	NRND	12.6	30	NA	NR	NA	NR	157.2	37	NA	8.0	9.5	174	132
Proteon	PTON	15.5	11	31274.7	10	24636.8	13	103.4	-14	208.9	15.0	-23.2	NM	NE
SynOptics Communications	SNPX	84.1	94	48470.6	3	33509.8	4	704.5	81	405.8	11.9	129.8	94	64
S3	SIII	11.5	156	80131.9	1	73242.4	1	113.0	269	784.5	10.2	24.4	423	47
3Com (5)	COMS	64.3	33	32646.4	7	25367.2	10	617.2	46	313.1	10.4	60.2	432	106
Tricord Systems	TRCD	5.0	42	24905.9	16	26544.2	7	80.0	139	396.2	6.3	9.5	NM	52
Wellfleet Communications (6)	WFLT	19.1	94	25892.9	15	25374.6	9	180.1	112	244.1	10.6	45.0	143	42
Xircom (9)	XIRC	6.9	76	35658.0	5	25329.4	11	82.2	39	426.0	8.4	15.8	64	43
Xyplex	XPLX	10.2	28	27816.4	12	24767.7	12	76.8	31	210.5	13.2	13.5	12	75
(C) COMPUTERS														
Group Composite		11166.8	-6	18472.2		18758.3		140771.6	5	232.3	7.9	-7733.8	NM	NE
Advanced Logic Research (9)	AALR	3.9 **	-23	7314.1	21	7005.5	23	169.3	-18	314.6	2.3	-12.3	NM	NE
Amdahl	AMH	334.5 **	-10	60251.1	1	40889.6	1	1680.5	-33	302.7	19.9	-713.7	NM	NE
Apple Computer (9)	AAPL	664.6	10	44488.1	2	37483.7	2	7977.0	13	534.0	8.3	139.7	-84	475
AST Research (6)	ASTA	32.0 **	5	7090.0	22	8010.7	21	1412.2	50	313.2	2.3	-65.2	NM	NE
Commodore International (6)	CBU	19.5	-24	NA	NR	NA	NR	590.8	-35	NA	3.3	-356.0	NM	NE
Compaq Computer	CPQ	169.0	-2	16032.6	17	16840.3	12	7191.0	75	682.2	2.4	616.0	98	27
Concurrent Computer (6)	CCUR	27.3	0	16035.3	16	16324.0	13	220.5	-1	129.7	12.4	6.2	234	441
Convex Computer	CNX	33.2	0	33038.8	7	25949.9	8	193.1	-17	192.0	17.2	-63.0	NM	NE

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R&D SCOREBOARD

MPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
' Research	CYR	145.7 **	-10	29375.0	8	28572.6	5	894.9	12	180.4	16.3	84.4	NM	172.5
ı General (9)	DGN	100.2	10	154111	18	13769.0	17	1077.9	-3	165.8	9.3	-55.1	NM	NEG
ıpoint (7)	DPT	8.2	-20	5355.4	24	5551.5	24	205.8	-18	134.7	4.0	-10.9	NM	NEG
Computer (1)	DELL	36.3	16	6076.6	23	7842.3	22	2873.2	43	480.5	1.3	-38.8	NM	NEG
tal Equipment (6)	DEC	1530.1 **	-13	16243.3	15	14085.9	16	14371.3	3	152.6	10.6	-224.3	NM	NEG
ore Computer	ENCC	25.0	3	26288.8	10	21150.4	10	93.5	-29	98.2	26.8	-69.1	NM	NEG
/lett-Packard (10)	HWP	1761.0	9	18305.6	12	16087.4	14	20317.0	24	211.2	8.7	1783.0	35	98.8
rgraph	INGR	160.3	7	16873.0	14	13423.7	18	1050.3	-11	110.6	15.3	-172.6	NM	NEG
rnational Business Machines	IBM	4431.0	-13	17294.6	13	15076.6	15	62716.0	-3	244.8	7.1	-8797.0	NM	NEG
amid Technology (9)	PYRD	27.8	-2	27528.2	9	22322.5	9	233.7	22	231.2	11.9	9.6	NM	290.1
uent Computer Systems	SQNT	40.7	10	23916.5	11	20702.9	11	353.8	15	208.1	11.5	-6.3	NM	NEG
on Graphics (6)	SGI	146.1	6	39040.9	3	29176.1	3	1091.2	26	291.5	13.4	125.3	NM	116.7
tus Computer	SRA	89.3	7	34212.2	5	29121.3	4	513.7	6	196.8	17.4	30.7	-57	291.3
Microsystems (6)	SUNW	445.4	17	33604.2	6	28233.2	6	4308.6	20	325.1	10.3	223.9	-12	198.9
dem Computers (9)	TDM	346.4	10	34768.4	4	27061.8	7	2031.0	0	203.9	17.1	-463.1	NM	NEG
sys	UIS	515.2	-4	10514.3	19	10077.7	20	7742.5	-8	158.0	6.7	503.4	16	102.3
ng Labs (6)	WANG	72.2	-45	10483.5	20	10946.6	19	1247.0	-34	181.1	5.8	-196.3	NM	NEG
s International	ZEOS	1.9	-60	3965.2	25	3252.4	25	216.2	5	443.0	0.9	-12.1	NM	NEG
) DATA PROCESSING														
oup Composite		**256.1**	**20**	**6788.0**		**6255.4**		**4107.5**	**16**	**108.9**	**6.2**	**604.5**	**35**	**42.4**
iom (3)	ACXM	6.8	20	3378.5	9	3065.3	8	115.8	27	57.9	5.8	10.2	213	66.5
erican Management Systems	AMSY	18.7	22	4917.4	6	4897.2	7	364.0	9	95.8	5.1	30.7	5	60.9
omatic Data Processing (6)	AUD	132.4	19	6304.1	5	5141.6	6	2223.4	15	105.9	6.0	386.6	13	34.2
rs Group (6)	BSYS	6.9	19	6853.0	4	11816.1	2	88.3	18	88.3	7.8	7.4	NM	92.9
nputer Language Research	CLRI	8.2	13	9064.4	2	6064.0	4	109.0	-2	121.1	7.5	13.8	77	59.0
ch Holdings (2)	GTK	27.2	29	7157.6	3	7500.2	3	501.4	43	131.9	5.4	66.8	120	40.7
tional Data (5)	NDC	5.5	14	3567.1	8	2625.9	9	204.6	-6	132.0	2.7	14.6	14	37.8
Gard Data Systems	SNDT	43.6	43	19171.8	1	13589.2	1	381.4	18	167.6	11.4	63.2	39	69.1
tems & Computer Technology (9)	SCTC	6.9	-40	4915.7	7	5227.9	5	119.7	32	85.5	5.7	11.2	NM	61.3
) DISK & TAPE DRIVES														
oup Composite		**967.0**	**20**	**9232.5**		**12233.7**		**13886.5**	**14**	**132.6**	**7.0**	**-42.8**	**NM**	**NEG**
plied Magnetics (9)	APM	17.5 **	-27	2411.4	14	3055.4	13	335.9	13	46.3	5.2	-40.9	NM	NEG
ner Peripherals	CNR	137.5	45	14941.8	9	9389.3	10	2151.7	-4	233.9	6.4	-471.6	NM	NEG
C	EMC	59.0	76	24052.6	3	17046.9	3	782.6	103	319.2	7.5	179.7	317	32.8
byte	EXBT	31.6 **	-13	30372.4	1	25314.6	2	310.3	8	297.8	10.2	23.9	-38	132.2
tchinson Technology (9)	HTCH	9.8	71	2396.8	15	1774.9	15	198.7	24	48.4	5.0	1.1.1	-20	88.6
nega	IOMG	19.0	-14	17615.6	4	14824.8	5	147.1	6	136.6	12.9	-16.7	NM	NEG
mag	KMAG	29.6 **	12	8476.1	12	6845.4	12	385.4	18	110.2	7.7	-2.5	NM	NEG
xtor (3)	MXTR	112.6	56	12654.0	11	8233.1	11	1426.4	39	160.3	7.9	46.4	NM	242.8
ropolis	MLIS	36.1	30	15714.5	7	9925.3	9	382.9	-3	166.6	9.4	-19.9	NM	NEG
antum (3)	QNTM	63.0	6	25669.6	2	30968.8	1	1697.2	51	691.3	3.7	146.6	97	43.0
kon (9)	REXN	13.3	-1	15184.4	8	13891.4	6	188.2	-9	215.6	7.0	-52.4	NM	NEG
gate Technology (6)	SGAT	154.0 **	16	3581.5	13	2874.3	14	3043.6	6	70.8	5.1	271.4	218	56.7
rage Technology	STK	163.3	7	16166.9	6	12521.8	8	1404.8	-9	139.1	11.6	-112.8	NM	NEG
Quest Technology (9)	SYQT	19.1	24	16481.4	5	15424.5	4	206.4	18	178.4	9.2	20.0	8	95.3
stern Digital (6)	WDC	101.6	13	13875.0	10	12691.6	7	1225.2	31	167.3	8.3	-25.1	NM	NEG
) PERIPHERALS & OTHER														
oup Composite		**1062.2**	**-1**	**8896.1**		**10519.3**		**19702.7**	**0**	**165.0**	**5.4**	**-293.7**	**NM**	**NEG**
A International (7)	AM	4.0	10	1037.5	18	1347.0	18	534.7	-14	138.4	0.8	-125.7	NM	NEG
ncTec (3)	BTEC	8.5 **	10	4376.3	15	4904.3	13	233.9	22	120.6	3.6	21.1	13	40.2
erry (2)	CHER	9.1	13	3197.1	17	2793.5	16	266.2	16	93.5	3.4	11.9	304	76.3
nicom	GECM	9.3 **	-12	4336.8	16	1867.7	17	221.9	0	103.3	4.2	-3.2	NM	NEG
y Tronic (6)	KTCC	6.7 **	27	5565.6	13	3751.5	15	123.3	-1	102.4	5.4	4.4	NM	153.3
ltope Group	MILT	5.4 **	-10	10297.1	10	8555.0	9	84.3	-26	160.6	6.4	0.2	-97	2586.6
AI Technologies	NATL	5.0	37	8964.3	12	7313.3	11	81.0	20	144.7	6.2	8.3	4	60.5
tional Computer Systems (1)	NLCS	13.8	-8	5100.4	14	4317.8	14	305.5	2	113.1	4.5	-2.9	NM	NEG
twork Computing Devices	NCDI	7.9	17	22175.1	5	21435.9	4	144.3	20	407.5	5.4	13.8	30	57.1
ntronix (3)	PTNX	10.2 **	-16	12287.1	7	10686.3	7	93.9	6	113.2	10.9	-2.2	NM	NEG
MS (9)	AQM	15.9	0	11124.9	8	9068.8	8	297.4	14	208.7	5.3	-4.9	NM	NEG
dius (9)	RDUS	15.2	30	41445.3	1	29076.2	1	134.9	-15	368.5	11.2	-29.4	NM	NEG
sterOps (6)	ROPS	9.1	24	28251.5	3	21254.8	5	100.0	-18	310.6	9.1	-16.7	NM	NEG

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COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROF
Standard Microsystems (2)	SMSC	17.2	31	26565.5	4	25327.3	3	250.5	89	386.0	6.9	27.9	NM	61.
SuperMac Technology	SMAC	17.9 **	91	34204.2	2	27237.5	2	202.5	62	386.5	8.9	-5.1	NM	NE
Symbol Technologies	SBL	23.1	28	11032.1	9	6521.5	12	360.0	4	172.2	6.4	19.4	NM	118.
Tseng Labs	TSNG	1.0	29	18722.2	6	12501.7	6	75.5	0	1398.6	1.3	16.4	-26	6.
Xerox	XRX	883.0	-4	9103.1	11	8298.9	10	16193.0	-1	166.9	5.5	-227.0	NM	NE
(G) SOFTWARE & SERVICES														
Group Composite		**2420.1**	**24**	**25659.5**		**24011.7**		**17913.3**	**21**	**189.9**	**13.5**	**3068.1**	**21**	**78.**
Adobe Systems (11)	ADBE	64.9 *	31	64931.9	1	48621.1	1	313.5	18	313.8	20.7	91.1	31	71
Aldus	ALDC	32.1	15	30484.8	19	24396.8	21	206.8	19	196.6	15.5	14.0	41	229
American Software (4)	AMSWA	10.8	20	12140.9	40	8125.2	40	106.8	-6	120.5	10.1	6.7	-76	159
Artisoft (6)	ASFT	5.0	62	11847.4	41	8015.8	41	84.6	16	198.7	6.0	14.5	-31	34
Autodesk (1)	ACAD	63.7	13	35631.4	11	30506.8	11	418.7	14	234.2	15.2	96.8	39	65.
Banyan Systems	BNYN	16.2	13	23378.6	26	22766.4	25	127.8	13	184.6	12.7	20.7	58	78.
BMC Software (3)	BMCS	44.7	60	49194.7	2	37860.2	3	238.5	29	262.4	18.8	93.4	40	47.
Boole & Babbage (9)	BOOL	15.0	0	22905.0	27	17719.0	33	118.2	7	181.1	12.7	11.2	45	133.
Borland International (3)	BORL	76.3	21	40457.3	6	32988.1	6	464.0	-4	246.1	16.4	-40.7	NM	NE
Broderbund Software (8)	BROD	13.7	29	34007.4	12	30770.4	9	95.6	27	237.8	14.3	21.9	42	62.
Cadence Design Systems	CDN	82.2	6	33179.7	13	30892.8	8	368.6	-12	148.9	22.3	-0.5	NM	NE
Ceridian	CEN	33.4	10	4394.7	42	7585.0	42	886.1	7	116.6	3.8	-18.2	NM	NE
Computer Associates International (3)	CA	223.3	10	30954.1	18	26512.3	18	1841.0	22	255.2	12.1	383.7	44	58.
Compuware (3)	CPWR	28.5	-32	15759.4	37	20713.7	27	234.9	34	129.9	12.1	50.8	NM	56
Comshare (6)	CSRE	18.9 *	5	21878.2	30	13814.3	37	105.2	-12	122.0	17.9	-1.1	NM	NE
Continuum (3)	CNU	43.4 *	2	39135.3	7	34885.6	4	122.9	-2	110.8	35.3	9.4	-37	462
Electronic Arts (3)	ERTS	37.5	74	41154.9	4	33002.2	5	298.4	70	327.9	12.6	43.7	59	85.
Evans & Sutherland Computer	ESCC	31.8	1	28870.0	22	25155.9	19	142.3	-4	129.3	22.3	2.8	-74	1121.
Informix	IFMX	48.8	42	28427.8	23	19798.4	29	352.9	24	205.4	13.8	87.7	42	55.
Interleaf (3)	LEAF	20.0 **	10	22241.6	29	20215.6	28	117.3	17	130.7	17.0	11.6	79	171
Intersolv (4)	ISLI	14.1	15	31450.9	16	28949.0	15	80.4	2	179.5	17.5	-12.0	NM	NE
Intuit (9)	INTU	13.0	56	21740.4	31	21740.4	26	121.4	45	203.3	10.7	13.8	69	94.
Keane	KEA	1.6	71	662.7	44	637.5	44	175.8	77	74.4	0.9	15.6	49	10.
KnowledgeWare (6)	KNOW	32.6	25	39122.6	8	23792.5	23	128.8	10	154.8	25.3	-27.2	NM	NE
Legent (9)	LGNT	70.9	18	29530.8	21	24543.8	20	442.2	4	184.2	16.0	92.9	99	76.
Logicon (3)	LGN	2.3	-19	748.2	43	801.2	43	323.6	9	103.6	0.7	25.2	35	9.
Lotus Development	LOTS	172.0	22	36298.9	10	32760.1	7	981.2	9	207.1	17.5	101.8	-15	169.
MacNeal-Schwendler (1)	MNS	22.3	1	NA	NR	NA	NR	79.6	3	NA	28.1	16.9	1	131.
Marcam (9)	MCAM	28.9 *	59	27781.7	24	23796.3	22	126.0	38	121.2	22.9	3.6	-71	793
Microsoft (6)	MSFT	470.0	34	32571.0	15	30210.2	13	3753.0	36	260.1	12.5	1401.0	35	33.
Novell (10)	NOVL	164.9	36	37222.8	9	30081.5	14	1122.9	20	253.5	14.7	104.0	-72	158.
Oracle Systems (5)	ORCL	169.5	35	18326.3	34	14929.4	36	1502.8	28	162.5	11.3	218.0	127	77.
Parametric Technology (9)	PMTC	111.5	47	127575	39	17401.0	34	163.1	88	181.4	7.0	68.5	106	16.8
Phoenix Technologies (9)	PTEC	15.8 **	3	40665.8	5	42627.6	2	76.3	7	196.0	20.7	4.3	2	365.
Progress Software (11)	PRGS	15.6	17	18455.6	33	18009.0	32	111.6	31	132.1	14.0	19.8	32	78.6
Ross Systems (6)	ROSS	15.4	69	22518.2	28	18095.5	31	87.1	15	127.2	17.7	-0.6	NM	NE
Santa Cruz Operation (9)	SCOC	24.6	11	20369.2	32	19189.5	30	178.2	9	147.6	13.8	17.3	89	141.9
Software Toolworks (3)	TWRX	4.8	39	14373.1	38	10593.5	39	119.6	17	357.0	4.0	3.7	NM	129.0
Sterling Software (9)	SSW	46.3	3	16535.7	36	12289.4	38	411.8	9	147.1	11.2	-48.3	NM	NE
Structural Dynamics Research	SDRC	35.8	23	30172.7	20	23319.9	24	186.3	14	157.0	19.2	21.6	1	166.2
Sybase	SYBS	69.5 **	48	27491.7	25	27867.2	16	426.7	61	168.8	16.3	71.2	80	97.6
Symantec (3)	SYMC	44.3	24	43783.6	3	30614.7	10	206.0	-6	203.6	21.5	-17.2	NM	NE
Synopsys (9)	SNPS	18.4	80	31150.8	17	27509.3	17	108.0	71	183.1	17.0	20.9	87	88.
System Software Associates (10)	SSAX	29.6	42	17411.8	35	16663.2	35	263.4	15	154.9	11.2	35.7	-14	82.9
Viewlogic Systems	VIEW	16.6	29	32887.3	14	30424.7	12	93.5	33	184.7	17.8	18.1	70	92.
(H) SYSTEM DESIGN														
Group Composite		**449.2**	**1**	**17905.5**		**14750.3**		**3881.9**	**-9**	**154.7**	**11.6**	**-446.6**	**NM**	**NEG**
ASK Group (6)	ASKI	51.1	21	22117.2	4	18818.7	4	426.2	-1	184.3	12.0	1.2	NM	4127.
Bolt Beranek & Newman (6)	BBN	34.0	1	20473.8	5	14590.9	6	233.5	-10	140.4	14.6	-32.3	NM	NEG
Cerner	CERN	12.8	32	13964.1	7	12066.3	7	120.6	19	131.3	10.6	24.1	48	53.
Computervision	CVN	119.9 **	6	31562.6	2	25678.4	3	827.3	-22	217.7	14.5	-571.1	NM	NEG
Control Data Systems	CDAT	23.8	-40	7569.1	12	10059.5	9	451.8	-13	143.8	5.3	11.0	NM	216.8
FileNet	FILE	15.3	-8	17266.7	6	15977.4	5	158.8	15	179.4	9.6	12.5	NM	122.0

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MPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE 1993 $	1993 RANK	AVG. 1989-93 $	AVG. 1989-93 RANK	SALES 1993 $ MIL.	CHANGE FROM 1992 %	PER EMPLOYEE $ THOUS.	R&D AS % OF SALES	PROFITS 1993 $ MIL.	CHANGE FROM 1992 %	R&D AS % OF PROFITS
)	HBOC	25.5	18	13556.8	8	11273.7	8	237.1	17	125.9	10.8	30.5	54	83.7
dmark Graphics (6)	LMRK	13.7	-4	26788.2	3	26554.0	2	87.6	7	171.7	15.6	7.1	NM	193.7
Systems	MAIS	5.2	-67	6682.8	13	6055.8	13	115.3	-59	146.9	4.6	28.3	NM	18.5
tor Graphics	MENT	85.0	7	40498.6	1	32609.8	1	339.8	-3	161.8	25.0	-29.6	NM	NEG
gnition International (10)	REC	14.6	23	8679.1	10	6741.3	12	230.6	16	137.0	6.3	11.8	27	123.5
red Medical Systems	SMED	37.1	10	9237.1	9	8561.9	10	500.5	7	124.7	7.4	51.7	15	71.8
d Systems (9)	TRSC	11.0	9	7921.6	11	7446.1	11	152.8	0	109.9	7.2	8.1	48	135.3
PAPER & FOREST PRODUCTS														
USTRY COMPOSITE		**440.6**	**0**	**2051.7**		**1890.9**		**39632.4**	**0**	**184.5**	**1.1**	**1585.4**	**31**	**27.8**
e Cascade	BCC	11.5	-2	662.1	11	610.7	11	3958.3	7	228.0	0.3	-125.6	NM	NEG
solidated Papers	CPER	6.0	7	1213.1	8	1167.0	10	947.3	5	191.5	0.6	110.4	36	5.4
son Burnes Group	HBGI	1.1	-8	2165.4	5	2103.1	6	132.7	4	261.3	0.8	2.4	NM	46.3
es River Corp. of Virginia	JR	41.8	-5	1194.3	10	1168.6	9	4650.2	-2	132.9	0.9	16.7	NM	250.8
berly-Clark	KMB	158.5	2	3762.1	1	3471.2	1	6972.9	-2	165.5	2.3	811.0	49	19.5
nville	MVL	31.3	-8	1956.2	7	2070.2	7	2275.9	3	142.2	1.4	6.4	-92	492.7
onier	RYN	7.3	-12	2808.5	2	2808.5	2	936.3	-4	360.1	0.8	105.4	NM	6.9
t Paper	SPP	62.3	2	2405.4	3	2245.3	4	4748.9	-7	183.4	1.3	-342.7	NM	NEG
on Camp	UCC	45.9	3	2399.9	4	2425.4	3	3120.4	2	163.2	1.5	100.1	53	45.8
stvaco (10)	W	30.5	-2	2110.7	6	2106.5	5	2344.6	0	162.4	1.3	92.9	-55	32.8
yerhaeuser	WY	44.5	3	1209.8	9	1321.4	8	9544.8	3	259.7	0.5	808.5	44	5.5
SERVICE INDUSTRIES														
USTRY COMPOSITE		**205.8**	**15**	**1141.1**		**3316.7**		**20394.5**	**3**	**113.1**	**1.0**	**660.7**	**12**	**31.1**
way (6)		4.9	-17	620.3	20	248.6	24	1710.6	-5	216.5	0.3	18.8	NM	26.0
er Mfg.	BTLR	2.3	21	750.7	18	658.6	19	575.8	15	187.9	0.4	29.8	NM	7.7
gon Carbon	CCC	6.5	5	4932.6	4	4069.0	5	269.4	-10	204.1	2.4	30.8	-30	21.1
is Water & Waste Industries (4)	DWW	1.0	30	1398.1	12	764.6	17	191.0	2	261.3	0.5	0.4	NM	262.1
amics Research	DRCO	2.0	37	1689.4	10	974.9	13	101.1	-1	85.1	2.0	3.0	-54	67.1
&G	EGG	34.7	8	1084.4	14	821.8	14	2697.9	-3	84.3	1.3	121.9	1	28.5
ler Wheeler	FWC	8.4	21	893.0	16	766.6	16	2583.0	4	276.3	0.3	99.3	41	8.4
bert Associates	GILBA	1.7	32	450.6	21	500.5	21	285.4	-3	74.2	0.6	11.2	-25	15.5
itage Media	HTG	1.1	35	66.9	25	56.0	25	291.2	16	17.9	0.4	3.0	NM	36.1
sehead Resource Development	HHRD	3.4	33	5914.8	2	3457.6	6	98.2	-3	170.7	3.5	0.2	NM	1709.0
rmation Resources	IRIC	23.5	120	4054.3	7	1762.2	9	334.5	21	57.7	7.0	36.0	12	65.2
tuform Technologies	INSUA	2.7	-38	4369.8	6	14593.6	2	100.5	5	161.6	2.7	11.0	NM	24.8
man	KAMNA	18.4	3	3421.6	8	2395.2	7	792.5	1	147.8	2.3	-40.5	NM	NEG
Dermott International (3)	MDR	19.5 **	-9	748.4	19	802.2	15	3172.6	-10	122.0	0.6	125.6	-12	15.5
rrison Knudsen	MRN	3.7	NM	310.7	23	310.7	23	2702.5	19	226.9	0.1	62.8	158	5.9
cogen	MYCO	16.9	100	19900.8	1	30876.0	1	120.5	255	142.3	14.0	-54.9	NM	NEG
tional Education	NEC	24.0	20	5714.3	3	4561.3	3	355.9	-5	84.7	6.7	-22.7	NM	NEG
tional Patent Development	NPD	2.8	-39	1653.3	11	2181.2	8	189.7	-3	110.2	1.5	-10.7	NM	NEG
mier Industrial (5)	PRE	3.4	0	772.7	17	706.5	18	690.9	8	157.0	0.5	138.2	11	2.5
C Energy Services	RES	1.2	0	983.8	15	1258.5	11	123.5	23	105.5	0.9	9.9	82	11.6
ance Applications (1)		5.7	-31	344.8	22	571.4	20	1669.6	11	101.2	0.3	69.8	16	8.1
ley Industries	TAL	3.1	-20	1197.5	13	1205.2	12	324.2	1	124.4	1.0	-3.2	NM	NEG
ion Switch & Signal	UNSW	4.8	85	4456.4	5	4456.4	4	164.1	21	153.8	2.9	7.8	104	60.7
rden (1)	VRLN	4.3	20	2138.9	9	1730.7	10	291.9	10	143.8	1.5	18.7	30	23.2
lt Information Sciences (10)	VOLT	5.8	2	294.4	24	390.3	22	558.1	7	28.2	1.0	-5.6	NM	NEG
TELECOMMUNICATIONS														
DUSTRY COMPOSITE		**4240.6**	**7**	**7149.1**		**13333.4**		**114699.4**	**3**	**193.5**	**3.7**	**8081.1**	**-36**	**52.5**
C Telecommunications (10)	ADCT	41.0 **	14	16648.2	11	13366.9	12	366.1	16	148.7	11.2	49.7	43	82.4
pect Telecommunications	ASPT	11.5	30	22936.1	5	19857.1	5	106.5	50	212.5	10.8	18.8	186	61.1
&T	T	3428.0	6	11104.6	15	10379.4	14	67156.0	3	217.5	5.1	6213.0	5	55.2
C Industries (7)	CMCI	6.3	19	3781.6	20	3781.6	19	150.6	7	90.4	4.2	0.5	-88	1224.1
msat	CQ	13.4	-12	8766.9	16	9996.0	15	640.4	14	419.4	2.1	124.5	86	10.8
C Communications	DIGI	104.2	20	25777.0	4	22445.6	3	730.8	36	180.8	14.3	109.5	548	95.2
ecutone Information Systems	XTON	9.9 **	19	4116.7	19	3435.2	20	303.3	9	126.4	3.3	8.0	98	122.9
neral DataComm Industries (9)	GDC	27.6	20	15153.3	13	12095.1	13	211.8	7	116.4	13.0	7.2	138	385.5
E	GTE	135.0	-15	1153.8	22	1481.6	21	19748.0	-1	168.8	0.7	1692.0	-41	8.0
ellicall	ICL	4.1	15	17523.4	9	16353.2	10	84.2	-46	358.5	4.9	-1.3	NM	NEG
er-Tel	INTL	4.1	5	6744.3	17	6869.4	17	89.3	13	146.3	4.6	6.1	25	67.2
/A-Com (9)	MAI	19.4	-1	4933.9	18	3975.1	18	339.9	-12	86.4	5.7	-24.7	NM	NEG

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R&D SCOREBOARD

COMPANY	STOCK SYMBOL	R&D EXPENSES 1993 $ MIL.	R&D EXPENSES CHANGE FROM 1992 %	R&D EXPENSES PER EMPLOYEE 1993 $	R&D EXPENSES PER EMPLOYEE 1993 RANK	R&D EXPENSES PER EMPLOYEE AVG. 1989-93 $	R&D EXPENSES PER EMPLOYEE AVG. 1989-93 RANK	SALES 1993 $ MIL.	SALES CHANGE FROM 1992 %	SALES PER EMPLOYEE $ THOUS.	SALES R&D AS % OF SALES	PROFITS 1993 $ MIL.	PROFITS CHANGE FROM 1992 %	PROFITS R&D AS % OF PROFI
Nynex	NYN	162.8	24	2136.5	21	1471.7	22	13407.8	2	176.0	1.2	-445.1	NM	NEC
Octel Communications (6)	OCTL	35.0	38	22344.0	6	17679.9	7	249.5	32	159.3	14.0	33.6	10	104
Pacific Telesis Group	PAC	30.0	0	499.6	23	556.8	23	9244.0	2	153.9	0.3	201.0	-89	14.9
PictureTel	PCTL	33.4	47	41130.7	1	30527.1	2	176.3	25	217.3	18.9	11.4	-15	293.
Plantronics (3)	PLT	6.9	60	NA	NR	NA	NR	112.3	17	NA	6.1	-4.6	NM	NEC
Scientific-Atlanta (6)	SFA	60.2	15	16711.4	10	13854.3	11	730.6	26	203.0	8.2	32.9	52	182.
Symmetricom (6)	SYMM	8.4	41	13541.3	14	8721.4	16	87.9	28	142.5	9.5	7.7	173	108.
Telco Systems (8)	TELC	15.6	33	35183.3	2	21864.9	4	83.2	-14	188.3	18.7	-18.2	NM	NEC
Telebit	TBIT	9.2	-6	27671.7	3	31157.8	1	80.8	-8	243.3	11.4	-10.5	NM	NEC
Tellabs	TLAB	51.0	20	21513.5	7	16987.0	9	320.5	24	135.2	15.9	35.8	87	142.
U. S. Robotics (9)	USRX	14.5	43	19237.1	8	18268.4	6	189.2	68	250.5	7.7	25.9	47	56.
VMX (6)	VMXI	9.4	37	16388.5	12	17227.1	8	90.5	20	157.6	10.4	7.8	39	119.

ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard category under which it is listed

A

[illegible] 10a
[illegible] 10b
[illegible] 1
Acme Electric 7a
[illegible] 13b
[illegible] 4
[illegible] 10b
[illegible] 15d
ADAC Laboratories 10b
[illegible] 15b
ADC Telecomm. 18
[illegible] 15g
[illegible] 15c
Advanced Medical 10b
Advanced Micro 7d
[illegible] 10b
AEL Industries 7b
AGCO 13c
Agway 17
[illegible] 3
[illegible] 13c
[illegible] 13d
[illegible] 14a
[illegible] 15g
[illegible] 14b
Alcan Group 7b
[illegible] 10a
[illegible] 13a
AlliedSignal 4
[illegible] 7d
[illegible] 14a
ALZA 10a
AM International 15f
[illegible] 15c
[illegible] 5b
American Crystal Sugar 8
[illegible] 10a
[illegible] 13a
[illegible] 10a
American Maize-Products 8
[illegible] 15d
American Power 7a
[illegible] 15g
[illegible] 11
Ametek 7a
[illegible] 10a
Amoco 9a
AMP 7d
[illegible] 7b
[illegible] 7d
Amsco International 10b
[illegible] 15a
[illegible] 7d
Analogic 7c
[illegible] 7b
Anthony Industries 12
[illegible] 15c
Applied Magnetics 15e
[illegible] 13c
Applied Power 13c
[illegible] 13a
Archer Daniels 8
Arco Chemical 3
[illegible] 12
[illegible] 14b
Armstrong World 5a
[illegible] 10b
[illegible] 15g
[illegible] 9a
[illegible] 11
[illegible] 15h
[illegible] 18
AST Research 15c
[illegible] 13c
[illegible] 18
[illegible] 9a
[illegible] 7d
[illegible] 7d
Autoclave Engineers 7c
[illegible] 15g
[illegible] 15d
[illegible] 13a
[illegible] 12
Avon Products 5c
Avx 7b

B

[illegible] 13c
Badger Meter 7c
[illegible] 9b
Balchem 7a
[illegible] 13c
Bard 6
[illegible] 13a
[illegible] 15f
[illegible] 2c
[illegible] 15g
[illegible] 10b
[illegible] 5b
[illegible] 10b
[illegible] 10b
[illegible] 1
[illegible] 7c
[illegible] 10b
Bell Electronics 7c
[illegible] 14c
Bell & Howell 15a
[illegible] 12
[illegible] 6
[illegible] 13b
[illegible] 7a
Bethlehem Steel 14b
Betz Laboratories 3
[illegible] 13a
[illegible] 13c
Bio-Rad Laboratories 7c
[illegible] 10a
[illegible] 10a
[illegible] 10b
[illegible] 15d
BJ Services 9b
Black & Decker 13b
[illegible] 13a
Block Drug 5c
[illegible] 13b
BMC Software 15g
Boeing 1
[illegible] 16
[illegible] 15h
[illegible] 15g
Borden 8
Borg-Warner Automotive 2b
[illegible] 15g
Boston Scientific 10b
Brady (W H) 13a
[illegible] 2b
Briggs & Stratton 13c
Bristol-Myers Squibb 10a
[illegible] 15g
Brooktree 7d
[illegible] 13b
[illegible] 12
[illegible] 14c
[illegible] 13d
Burr-Brown 7d
Butler Mfg. 17
BWIP Holding 13c

C

[illegible] 15b
[illegible] 3
[illegible] 15g
[illegible] 17
[illegible]ma Microwave 7b
[illegible] 12
Came[illegible] 3
[illegible] 13c
Campbell Soup 8
[illegible] 13a
Carpenter Tech. 14b
Cartel Waltare 10a
[illegible] 13b
[illegible] 13c
CB Industries 3
Centra Spinnaker 13a
[illegible] 15g
[illegible] 15h
[illegible] 13a
Chattem 5c
Checkpoint Systems 7b
[illegible] 15f
[illegible] 9a
[illegible] 15b
Chips & Technologies 7d
[illegible] 10a
Chrysler 2a
Church & Dwight 5c
Cincinnati Milacron 13b
[illegible] 10b
Cirrus Logic 15b
[illegible] 15b
[illegible] 2b
[illegible] 13c
[illegible] 5c
CMC Industries 18
CMI 13c
[illegible] 12
Cobra Electronics 7b
Coherent 7c
Cohu 7c
[illegible] 7a
Colgate-Palmolive 5c
Cotec Industries 4
[illegible] 13c
[illegible] 15c
[illegible] 15c
Compression Labs 7b
[illegible] 15g
[illegible] 15d
Computer Products 7a
[illegible] 15h
[illegible] 15g
[illegible] 18
[illegible] 15g
[illegible] 13d
Concurrent Computer 15c
[illegible] 15e
[illegible] 16
Continental Baking Group 8
Continental Can 6
[illegible] 15g
[illegible] 15h
[illegible] 15c
Cooper Companies 10b
Cooper Industries 7a
Cooper Tire & Rubber 2c
Coors (Adolph) 5b
Copley Pharmaceutical 10a
[illegible] 10b
[illegible] 13a
CPC International 8
[illegible] 13a
[illegible] 15c
Crompton & Knowles 3
Cross (A.T.) 13a
Crown Cork & Seal 6
Crown Crafts 13d
[illegible] 7d
Cubic 7c
Cummins Engine 2b
Curtiss-Wright 1
Cypress Semiconductor 7d
Cyrix 7d

D

Da[illegible]os Semiconductor 7d
[illegible] 2b
Daniel [illegible]ustries 7c
Data General 15c
[illegible] 15b
[illegible] 15c
Datascope 10b
Davis Water & Waste Inds 17
Day Runner 15a
[illegible] 13c
Dekalb Genetics 8
[illegible] 5c
[illegible] 8
Dell Computer 15c
Dentsply Int'l 10b
Detrex 3
Detroit Diesel 2b
Dexter 3
[illegible] 10a
Diasonics Ultrasound 10b
Dicon Electronics 7d
Diebold 15a
[illegible] 15b
[illegible] 9b
[illegible] 15c
Digital Microwave 7b
Dionex 7c
[illegible] 2b
[illegible] 13a
[illegible] 13c
Dow Chemical 3
[illegible] 14c
[illegible] 13c
DSC Communs. 18
DuPont 3
Duracell International 13a
[illegible] 13c
Dynamics Corp. of America 5a
[illegible] 17
[illegible] 15b

E

[illegible]EAC 10a
[illegible] 13a
Eagle-Picher Industries 2b
Eastman Chemical 3
[illegible] 12
Eaton 2b
Echlin 2b
Ecolab 5c
EDO 7b
[illegible] 17
[illegible] 13a
[illegible] 13c
Electromagnetic Sciences 7b
Electronic Arts 15g
[illegible] 15b
[illegible] 15e
Emerson Electric 7a
[illegible] 15b
Encore Computer 15c
[illegible] 3
[illegible] 13a
Escalade 12
ESCO Electronics 7c
[illegible] 13a
[illegible] 13c
Ethyl 3
[illegible] 15g
[illegible] 15e
Exar 7d
Exce. Industries 2b
[illegible] 18
Exide Electronics Group 7a
[illegible] 9a

F

[illegible] 13d
[illegible] 13a
[illegible] 5a
Farmland Industries 8
Fay 13c
[illegible] 5a
Federal-Mogul 2b
[illegible] 3
Figgie Int'l 4
[illegible] 15h
[illegible] 9a
[illegible] 13a
First Mississipp. 3
Fischer & Porter 7c
[illegible] 12
Flexsteel Industries 5a
[illegible] 13c
Fluke 7c
FMC 13c
[illegible] 13a
Ford Motor 2a
Forest Laboratories 10a
Foster Wheeler 17
Franklin Electric 7a
Fresenius USA 10b
FSI International 13c
Fuller (H.B.) 3
[illegible] 13a

G

GH Holdings 3
Gabriel (Lewis) Toys 12
[illegible] 13c
Gen-Probe Sciences 7c
[illegible] 1
[illegible] 10a
[illegible] 15a
[illegible] 18
General Dynamics 1
General Electric 4
General Instrument 7b
General Mills 8
[illegible] 2a
[illegible] 13c
Genetics Institute 10a
[illegible] 15f
Genlyte Group 7a
GenRad 7c
Genzyme 10a
[illegible] 3
Gerber Scientific 13c
[illegible] 13b
Gilbert Associates 17
[illegible] 5c
[illegible] 13b
GM Hughes Electronics 7b
[illegible] 3
[illegible] 2c
Gould's Pumps 13c
Grace (W R.) 3
[illegible] 13c
Great Lakes Chemical 3
Green (A.P.) Industries 11
Grow Group 3
[illegible] 18
[illegible] 15d
GT 7d
[illegible] 11
Guilford Mills 13d
Gundle Environmental Sys. 13c

H

[illegible] 7c
[illegible] 10b

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ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard category under which it is listed

[illegible] 9b
[illegible] Brother 8
[illegible] 12
[illegible] 12
[illegible] Industries 7b
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7b
13a
12
[illegible] 14b
15h
[illegible] 10b
[illegible] 5c
3
[illegible] 17
ey Foods 8
[illegible] 15c
13a
[illegible] 13a
[illegible] 7a
[illegible] Group 16
[illegible] 15a
[illegible] 7c
al Foods 8
[illegible] 17
al 7a
[illegible] 15a
[illegible] Technology 15e
[illegible] Industries 5b
[illegible] 13b

15c
[illegible] 10a
[illegible] 13a
10a
ndustries 7c
ial Holly 8
co 13c
ec Chemical 3
[illegible] 17
15g
[illegible] 13c
7d
[illegible] 17
7c
nent Systems 13a
ated Device Tech 7d
d
18
el 18
[illegible] 15c
re 13c
er 15g
ational Flavors 3
[illegible] 13a
Multifoods 8
ational Rectifier 7d
pecialty Foods 3
[illegible] 15g
15g
re 10b
go 15e
13c
7b
10a

Circuit 7d
[illegible] 16
[illegible] 13c
[illegible] 10b
son Controls 7c
son Worldwide 12
7a
Technologies 13c
Lighting 7a

K

[illegible] 1
[illegible] 7c
[illegible] 14a
[illegible] 17
[illegible] Industries 13c
[illegible] 15g
Keithley Instruments 7c
[illegible] 8
Kemet 7d
Kendall Intl 10b
[illegible] 13c
[illegible] 13b
[illegible] 13c
[illegible] 10b
[illegible] 9a
[illegible] 14c
[illegible] Trans 15f
[illegible] Intl 5a
[illegible] 16
[illegible] 7c
[illegible] 3
[illegible] 13a
Kollmorgen 7a
[illegible] 15e
[illegible] & Settlements 13c

L

La-Z-Boy Chair 5a
[illegible] 11
[illegible] 13c
[illegible] & Sensors 7a
[illegible] 15h
Lattice Semiconductor 7d
Lawter International 3
[illegible] 13a
LeaRonal 3
[illegible] 15g
Leggett & Platt 5a
Life Technologies 10a
Lilly (Eli) 10a
[illegible] 11
[illegible] Electric 13b
[illegible] Mfg 13c
Linear Technology 7d
Liqui-Box 6
Littelfuse 7a
Litton Industries 7b
[illegible] 1
Loctite 3
Logicon 15g
Loral 7b
[illegible] Development 15g
Lowrance Electronics 7b
LSI Logic 7d
LTV 4
LTX 7c
Lubrizol 3
[illegible] 12
[illegible] 13a

M

[illegible] 18
MacDermid 3
MacNeal-Schwendler 15g
MagneTek 7a
[illegible] Systems 15h
[illegible] Group 10b
[illegible] 13c
Magnetek 16
Magnum 15g
Marion Merrell Dow 10a
Mark Controls 13a
Mark IV Industries 13a
Marquette Electronics 10b
Martin Marietta 1
[illegible] Materials 11
Maxtor 13d
[illegible] Science 13a
Mayo 12
[illegible] Integrated Energy 7d
Maytag 15e
[illegible] 10a
[illegible] 14a
[illegible] 10b
Maybelline 5c
MB Communications 15b
McCormick 8
McDermott Intl 17
McDonnell Douglas 1
[illegible] 10b
[illegible] 7c
[illegible] 10b
[illegible] 10b
[illegible] 13c
[illegible] 10b
[illegible] 15h
Merck 10a
[illegible] 11
Methode Electronics 7d
Microchip Technology 7d
Microdyne 7b
Micron Technology 7d
Micronics Computers 7d
[illegible] 15e
[illegible] 15g
Miller (Herman) 15a
Millipore 7c
Miltope Group 15f
Mine Safety Appliances 10b
[illegible] 3
[illegible] 13a
[illegible] 3
Mobil 9a
Modine Mfg 2b
Molex 7d
Monarch Machine Tool 13b
[illegible] 3
Moog 2b
[illegible] 11
Moore Products 7c
[illegible] 17
Morton International 3
[illegible] 7b
Motor Coach Inds Intl 2a
Motorola 7b
MTS Systems 7c
[illegible] 17
[illegible] 10a

N

Nacco Industries 13b
[illegible] 15f
Nalco Chemical 3
Nashua 6
[illegible] 15f
[illegible] 15d
National Education 17
[illegible] 7d
National Steel 14b
National Patent Devel 17
Navistar International 2a
Nellcor 10b
[illegible] 15f
Network Equipment Tech 15b
Network General 15b
Network Systems 15b
Neutrogena 5c
[illegible] 13c
[illegible] 7c
Nichols Institute 10b
Nike 5b
NL Industries 3
[illegible] 15b
[illegible] 14c
[illegible] 13c
Northrop 1
[illegible] 15g
[illegible] 13c
[illegible] 13a
[illegible] 18

O

[illegible] 13a
Oak Industries 7c
Occidental Pet 9a
Oceaneering Intl 9b
[illegible] 18
[illegible] 1
OEC Medical Systems 10b
Ohio Edison Corp. of America 13a
[illegible] 3
OM Group 3
[illegible] 7d
Optical Coating Laboratory 7c
[illegible] 10b
[illegible] 15g
[illegible] 1
[illegible] 2a
[illegible] 13c
[illegible] 12
[illegible] 11
Owens-Illinois 6

P

Paccar 2a
Pacific Scientific 1
[illegible] 18
Pall 4
PAR Technology 15a
[illegible] 6
[illegible] 15g
[illegible] 13a
[illegible] Engineering & Mfg 13a
[illegible] 13c
Penwest 8
PepsiCo 5b
Perkin-Elmer 7c
[illegible] 10a
Petrolite 3
Pfizer 10a
[illegible] 14c
[illegible] 5b
Phillips Petroleum 9a
[illegible] 15g
[illegible] 18
Pioneer Hi-Bred 8
[illegible] 15a
Pittway 4
[illegible] 18
Plastic Containers 13a
[illegible] 6
[illegible] 12
Powell Industries 7a
[illegible] 11
[illegible] 11
Praxair 3
[illegible] 14c
[illegible] 4
Premier Industrial 17
[illegible] 15f
Procter & Gamble 5c
[illegible] 15g
[illegible] 15b
Puritan-Bennett 10b
[illegible] 15c
[illegible] 15a

Q

[illegible] 15f
Quaker Chemical 3
Quaker Oats 8
Qualcomm 7b
[illegible] 15e
[illegible] 12

R

Radiation Systems 7b
[illegible] 15f
Ralston Purina Group 8
[illegible] 15f
Raychem 7a
[illegible] 13b
[illegible] 16
Raytech 2b
Raytheon 7b
Read-Rite 7d
Recognition Intl 15h
Reliance Electric 7a
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Rexene 3
[illegible] 15e
Reynolds & Reynolds 15a
[illegible] Metals 14a
[illegible] 10a
Rival 5a
[illegible] 6
[illegible] 14c
Roadmaster Inds 12
Robbins & Myers 7a
Rockwell International 4
Rogers 7d
Rohm & Haas 3
Roper Industries 13c
Ross Systems 15g
Roya Appliance Mfg 5a
[illegible] 17
[illegible] 11
[illegible] 13a

S

S3 15b
[illegible] 15g
Scherer (R.P.) 10a
Schering-Plough 10a
Schlumberger 9b
Schwitzer 2b
SCI Systems 7d
[illegible] 17
[illegible] 18
SciMed Life Systems 10b
[illegible] 11
[illegible] 16
Scotts 3
Seagate Technology 15e
[illegible] 13a
Sealright 6
Sensormatic Electronics 7b
Sequa 1
[illegible] 15c
[illegible] 15h
Shedant 7d
[illegible] 11
Sierra Semiconductor 7d
Signal Technology 7c
[illegible] 15c
Silicon Valley Group 13c
Siliconix 7d
Simpson Industries 2b
SLM International 12
[illegible] 2b
[illegible] 15a
Smith International 9b
[illegible] 13b
Sofamor/Danek Group 10b
Software Toolworks 15g
Sola Group 10b
Solectron 7d
Sonoco Products 6
[illegible] 10b
[illegible] 2a
Spartan 7c
[illegible] 10a
Sprecher & Schuh 8
SPS Technologies 13a
[illegible] 13b
St. Ives Laboratories 5c
St. Jude Medical 10b
Standard Microsystems 15f
[illegible] 2b
[illegible] 15a
Stanford Telecomms 7b
Stanley Works 13b
Stant 2b
[illegible] 13b
Stepan 5c
Sterling Software 15g
[illegible] 13c
Storage Technology 15e
[illegible] 15c
[illegible] 15g
[illegible] 10b
Sturm, Ruger 13a
Sun 9a
Sun Microsystems 15c
[illegible] 1
[illegible] 15d
[illegible] 10b
Sunward Technologies 7d
Superior Industries Intl 2b
SuperMac Technology 15f
[illegible] 15g
Sybron Chemicals 5c
[illegible] 10b
Sylvan Foods Holdings 8
[illegible] 15g
[illegible] 15f
[illegible] 18
Synetic 10a
[illegible] 15g
[illegible] 15b
[illegible] 10a
[illegible] 13d
[illegible] 15e
[illegible] 15g
Systems & Computer Tech 15d

T

[illegible] 17
Tambrands 5c
Tandem Computers 15c
Tech-Sym 7b
[illegible] 10b
[illegible] 11
Tektronix 7c
[illegible] 18
[illegible] 18
Teledyne 4
[illegible] 18
[illegible] 15a
[illegible] 13c
Teradyne 7c
Texaco 9a
Texas Instruments 7d
Textron 4
Thermedics 7c
Thermo Electron 7c
[illegible] 13c
Thermo Instrument Sys 7c
Thiokol 1
[illegible] 7a
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[illegible] 13c
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[illegible] 11
[illegible] 10b
Toro 5a
Tracor 7c
Trans Resources 3
[illegible] 13a
[illegible] 14c
[illegible] 15h
Triarc 4
[illegible] 15b
Trident Microsystems 7d
Trimble Navigation 7c
[illegible] 13a
[illegible] 4
[illegible] 15f
Tuboscope Vetco Int 9b
[illegible] 13c
[illegible] 13c
[illegible] 12

U

U.S. Filter 11
[illegible] 18
U.S. Surgical 10b
Union Camp 16
Union Carbide 3
Union Switch & Signal 17
Uniroyal Chemical 3
[illegible] 13a
[illegible] 15c
United Industrial 7b
United Technologies 1
[illegible] 7d
Universal Foods 8
Unocal 9a
[illegible] 10a
[illegible] 11
USX-Marathon 9a
USX-U.S. Steel 14b

V

[illegible] 13a
[illegible] 11
Varco International 9b
Varian Associates 7b
[illegible] 13c
[illegible] 17
[illegible] 15a
Vicor 7d
[illegible] 12
Viewlogic Systems 15g
Vishay Intertechnology 7d
Vital Signs 10b
VLSI Technology 7d
VMX 18
[illegible] 17
[illegible] 11

W

Wabash National 2b
Wahlco Environmental Sys 13a
[illegible] 2b
[illegible] 15c
[illegible] 10a
Watkins-Johnson 7b
Weatherford Intl 9b
[illegible] 14b
[illegible] 15b
[illegible] 6
Western Atlas 9b
Western Co. of N. America 9b
[illegible] 15e
Westinghouse Electric 7a
[illegible] 16
[illegible] 16
[illegible] 13c
[illegible] 5a
[illegible] 13a
Winnebago Industries 12
Witco 3
WMS Industries 13a
Woodhead Industries 7a
Woodward Governor 7a
Wormington Foods 8
[illegible] 13a

X Y Z

[illegible] 15f
[illegible] 7d
[illegible] 7d
[illegible] 15b
[illegible] 15b
[illegible] 11
[illegible] 13c
Zenith Electronics 5a
[illegible] 10a
Zeos International 15c
[illegible] 7d
[illegible] 7d

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GLOSSARY

CRITERIA: Data are for the most recent fiscal year reported as of Apr. 30. Sales, Profits, and R&D Expenses were converted into millions of U.S. dollars using a 12-months' moving exchange rate based on the company's fiscal year; percentage changes from prior year were calculated using the local currency. Companies included in the survey are the 200 international companies reporting the greatest research and development expense.

PROFITS: Pretax income as reported by the company.

R&D EXPENSES: Dollars spent on company-sponsored research and development for the most recent fiscal year. Normally excludes R&D under contract to others, such as government agencies.

DATA: GLOBAL VANTAGE (STANDARD & POOR'S COMPUSTAT, A DIVISION OF McGRAW-HILL INC.)

FOOTNOTES ON PAGE 103

R&D RANK	COMPANY	COUNTRY CODE	SALES	%CHG	PROFITS	%CHG	R&D	%CHG
1	Daimler-Benz	DEU	60228	-2	-892	NM	5474	-3
2	Siemens	DEU	51946	0	1800	-9	4759	2
3	Hitachi	JPN	60515	-3	1865	-37	4025	-4
4	Matsushita Electric Industrial	JPN	56659	-5	1352	-54	3227	-4
5	Fujitsu	JPN	27799	1	78	NM	3107	-1
6	Alcatel Alsthom*	FRA	30614	1	1833	-8	2863	3
7	Toshiba	JPN	37159	-2	690	-25	2503	-2
8	RWE	DEU	33984	3	1418	12	2431	10
9	Nippon Telegraph & Telephone	JPN	52227	2	2435	-30	2372	3
10	NEC	JPN	28225	-7	-303	NM	2208	-9
11	Fiat*	ITA	48467	5	770	-44	2132	4
12	Philips Electronics*	NLD	32571	3	-284	NM	2087	-5
13	Bayer*	DEU	27334	-3	1724	-14	1988	3
14	Hoechst*	DEU	30136	-3	1354	-18	1865	1
15	Sony	JPN	32063	2	743	-53	1864	-4
16	Volkswagen	DEU	48904	-9	1274	NM	1755	-3
17	General Electric Co.	GBR	9614	-3	1451	4	1743	147
18	Ciba-Geigy*	CHE	15869	5	NA	NA	1678	8
19	Honda Motor	JPN	33183	-6	711	-32	1600	4
20	Robert Bosch*	DEU	22112	2	722	34	1478	7
21	Roche Holding*	CHE	9247	13	1910	31	1426	16
22	Mitsubishi Electric	JPN	26180	-2	639	-27	1354	0
23	Volvo*	SWE	14339	7	820	NM	1220	10
24	Glaxo Holdings	GBR	8029	20	2721	17	1200	24
25	BASF	DEU	25811	-3	1425	-17	1171	-6
26	Rhône-Poulenc*	FRA	15472	-3	877	5	1129	4
27	Sandoz*	CHE	10291	5	4[illegible]	29	1068	13
28	Nippondenso	JPN	12478	-6	566	-13	1007	1
29	Mitsubishi Heavy Industries	JPN	22683	1	1235	-16	989	-5
30	BCE	CAN	15376	-5	1[illegible]	95	965	-1
31	Northern Telecom	CAN	8376	1	-1100	NM	949	3
32	Canon	JPN	16562	-4	542	-41	940	4
33	Royal Dutch/Shell (combined)*	NLD	97174	5	9383	-2	881	6
34	Elf Aquitaine*	FRA	38989	0	2040	-35	874	8
35	SmithKline Beecham	GBR	9261	12	8[illegible]	9	864	20
36	Sharp	JPN	12112	-3	422	-29	853	5
37	Unilever (combined)*	NLD	43668	0	3587	6	816	2
38	Sanyo Electric	JPN	13918	-1	2[illegible]	475	765	1
39	Ford-Werke*	DEU	14256	-2	284	NM	731	9
40	Fuji Photo Film	JPN	9607	-5	1[illegible]	-19	678	2
41	Schering*	DEU	4327	-2	7[illegible]	2	635	3
42	Mannesmann*	DEU	1[illegible]	16	8[illegible]	-68	631	44
43	Alcatel-SEL*	DEU	4133	4[illegible]	1[illegible]4	5[illegible]	556	13
44	Imperial Chemical Industries	GBR	16208	[illegible]	562	NM	550	-5[illegible]
45	Akzo Nobel*	NLD	9632	0	542	8	530	4
46	Thomson-CSF*	FRA	6476	-3	355	-29	527	-5
47	Wellcome	GBR	3192	16	1035	32	505	28
48	Asea Brown Boveri*	DEU	2[illegible]	3	264	-5	502	10
49	Takeda Chemical Industries	JPN	5783	[illegible]	747	9	500	4
50	Compagnie des Machines Bull*	FRA	5716	-10	-873	NM	498	-9
51	AEG*	DEU	7976	-15	-21	NM	484	-2
52	Nestlé*	CHE	38906	8	3120	9	478	7
53	Sumitomo Chemical	JPN	7398	-8	254	-19	457	-3
54	Ricoh	JPN	8206	0	136	59	444	-5
55	Ferruzzi Finanziaria*	ITA	6318	2	1474	NM	441	-2
56	Matsushita Electric Works	JPN	9217	-3	264	-19	410	-4

R&D RANK	COMPANY	COUNTRY CODE	SALES	%CHG	PROFITS	%CHG	R&D	%CH
57	Rolls-Royce*	GBR	6290	1	-325	NM	404	[illegible]
58	British Telecommunications	GBP	22516	-1	3338	-36	394	-[illegible]
59	Elf Sanofi*	FRA	4060	9	314	42	393	1[illegible]
60	Solvay*	BEL	8331	1	358	-11	380	-[illegible]
61	L'Oréal*	FRA	7113	12	726	16	378	2[illegible]
62	Olivetti*	ITA	6581	-7	-459	NM	377	[illegible]
63	Oki Electric Industry	JPN	5136	-6	-254	NM	363	[illegible]
64	Astra*	SWE	2811	24	870	51	357	3[illegible]
65	British Petroleum	GBR	52509	5	1956	63	356	-2[illegible]
66	Fujisawa Pharmaceutical	JPN	2272	2	95	-28	320	[illegible]
67	Merck AG*	CHE	1732	8	200	-2	316	4[illegible]
68	Roussel Uclaf*	FRA	2855	3	273	72	309	[illegible]
69	Kubota	JPN	7551	3	141	-52	293	[illegible]
70	Kao	JPN	6193	6	388	11	288	[illegible]
71	Toray Industries	JPN	7793	-1	423	-7	275	[illegible]
72	Yamanouchi Pharmaceutical	JPN	2871	0	521	3	269	[illegible]
73	Henkel*	DEU	9108	9	399	-16	266	[illegible]
74	Komatsu	JPN	6986	-5	247	-27	260	-1[illegible]
75	Compagnie de Saint-Gobain*	FRA	14013	-1	782	-12	260	-[illegible]
76	British Aerospace	GBR	16265	6	-356	NM	252	1[illegible]
77	Nokia*	FIN	4077	18	-22	NM	250	1[illegible]
78	Omron	JPN	3715	4	75	-53	249	-1[illegible]
79	Eisai	JPN	1853	8	294	4	245	[illegible]
80	VEBA	DEU	40164	1	923	-18	242	-[illegible]
81	Daiichi Pharmaceutical	JPN	1925	8	386	7	236	[illegible]
82	Pioneer Electric	JPN	4735	-4	228	-52	231	[illegible]
83	Philips Kommunikations Industrie*	DEU	1501	-7	101	-46	228	1[illegible]
84	TDK	JPN	4227	-2	269	-31	222	[illegible]
85	Olympus Optical	JPN	2150	3	54	-4	211	2[illegible]
86	Pirelli*	ITA	6939	-18	-89	NM	208	2[illegible]
87	Ascom Holding*	CHE	2408	9	-36	NM	203	1[illegible]
88	Teijin	JPN	4966	-2	186	-38	203	4[illegible]
89	Konica	JPN	4036	-6	39	-23	189	[illegible]
90	Synthelabo*	FRA	1240	85	119	21	187	4[illegible]
91	Mitsubishi Petrochemical	JPN	4080	-3	85	-52	185	[illegible]
92	Total*	FRA	25867	-4	1028	-33	185	[illegible]
93	Thyssen	DEU	20710	-6	-534	NM	184	-1[illegible]
94	Mitsui Petrochemical Inds.	JPN	2744	-5	84	-35	184	-[illegible]
95	Valeo*	FRA	3909	4	136	21	183	1[illegible]
96	Tanabe Seiyaku	JPN	1955	-4	138	27	182	[illegible]
97	Pechiney*	FRA	12536	-12	249	-42	174	[illegible]
98	Kyocera	JPN	3466	-5	395	-15	173	1[illegible]
99	Kyushu Matsushita Electric	JPN	2861	3	202	-11	167	[illegible]
100	Sulzer*	CHE	4960	7	146	4	166	2[illegible]
101	Furukawa Electric	JPN	5800	-4	90	42	166	[illegible]
102	Reuters Holdings	GBR	2815	20	661	15	165	4[illegible]
103	Kirin Brewery	JPN	7786	-1	846	-12	157	[illegible]
104	Shin-Etsu Chemical	JPN	3701	-4	265	-32	156	-1[illegible]
105	CAE (1)	CAN	815	4	36	-5	155	[illegible]
106	Murata Mfg.	JPN	2185	-3	365	-12	153	[illegible]
107	BTR	GBR	14681	1	1926	18	152	[illegible]
108	Magneti Marelli*	ITA	2263	-12	-40	NM	152	[illegible]
109	Fisons*	GBR	2292	5	218	-35	151	1[illegible]
110	Shimuzu	JPN	19031	2	502	-41	149	[illegible]
111	Lucas Industries	GBR	3884	8	80	124	144	-[illegible]
112	Taisho Pharmaceutical	JPN	1638	7	442	3	142	[illegible]

INTERNATIONAL COMPANIES

COMPANY	COUNTRY CODE	SALES	%CHG	PROFITS	%CHG	R&D	%CHG
Casio Computer	JPN	3466	13	119	-35	137	-1
Landis & Gyr	CHE	1990	-3	95	21	137	-3
Pasteur-Merieux*	FRA	1257	15	195	72	136	-8
Ares-Serono*	CHE	855	14	121	12	133	17
Daikin Industries	JPN	3447	-5	90	-60	131	4
Nippon Oil	JPN	22844	1	605	15	131	1
BOC Group	GBR	4675	12	515	57	130	5
Ericsson*	ITA	1218	9	119	-34	129	8
Linde*	DEU	4956	9	300	-1	128	10
Yokohama Rubber	JPN	3610	-7	37	-66	126	-7
Racal Electronics	GBR	2155	-30	133	-49	124	-8
Toppan Printing	JPN	8821	-7	541	-23	123	66
Pirelli Tyre Holding*	NLD	3419	-4	-76	NM	122	-8
British Gas	GBR	15604	1	-921	NM	120	-10
Kuraray	JPN	2836	-1	161	-15	119	15
Shiseido	JPN	4509	1	332	-9	115	9
Fletcher Challenge	NZL	5049	-5	108	NM	115	-59
Boots	GBR	6706	8	686	8	113	13
Alps Electric	JPN	3366	-9	24	-80	112	NA
Sandvik*	SWE	2974	-2	259	-16	112	-6
Siebe	GBR	2770	0	313	9	111	-4
Alcatel Câble*	FRA	6653	28	407	10	108	30
Hafslund Nycomed*	NOR	944	6	230	11	105	6
Ono Pharmaceutical	JPN	764	20	331	49	105	27
Dai Nippon Printing	JPN	9573	-4	809	3	103	1
Klöckner-Humboldt-Deutz*	DEU	2504	-8	1	-82	101	-14
Alcan Aluminium	CAN	7232	-5	-106	NM	99	-21
Green Cross	JPN	994	3	47	-2	98	1
Hitachi Cable	JPN	2879	-7	123	-22	96	7
BSN*	FRA	13414	7	1120	-4	96	19
RTZ*	GBR	5785	-9	948	-4	95	-8
Nikon	JPN	1862	-15	-70	NM	94	-6
Nippon Sheet Glass	JPN	2301	-4	46	-42	91	-3
Outokumpu*	FIN	3394	20	-43	NM	88	3
L'Air Liquide*	FRA	5701	-6	689	-7	88	-39
OCE-van der Grinten	NLD	1424	-1	41	-36	86	-3
Pilkington	GBR	4401	-1	69	-47	84	-5
Hitachi Metals	JPN	3504	-7	74	-60	84	4
Gilardini*	ITA	2117	18	63	16	84	279
Kaneka	JPN	2075	-6	63	-48	83	7
Krauss-Maffei*	DEU	1056	13	24	-14	83	65
Atlas Copco*	SWE	2765	7	177	13	83	3
Finanziaria Ernesto Breda*	ITA	756	11	-476	NM	82	-1
UCB*	BEL	1586	5	82	15	82	15

R&D RANK	COMPANY	COUNTRY CODE	SALES	%CHG	PROFITS	%CHG	R&D	%CHG
157	SKF*	SWE	4629	1	-344	NM	82	-12
158	Smiths Industries	GBR	1153	14	166	2	77	6
159	Pechiney International*	FRA	6702	-22	551	103	77	-13
160	Lyonnaise Des Eaux-Dumez*	FRA	18086	5	328	-27	76	0
161	Linotype-Hell*	DEU	693	-16	36	391	75	-15
162	Ishihara Sangyo Kaisha	JPN	814	-4	-25	NM	73	10
163	Nitto Denko	JPN	2038	-2	68	-37	73	-1
164	B.A.T. Industries*	GBR	21430	7	2905	57	72	14
165	Imperial Oil	CAN	6821	2	440	25	69	7
166	TI Group*	GBR	2030	28	154	-17	69	58
167	Bremer Vulkan Verbund*	DEU	2859	36	54	-11	67	27
168	Immuno International*	CHE	452	15	40	0	67	31
169	Rohm	JPN	1501	-9	130	-7	66	3
170	Snow Brand Milk Products	JPN	8854	2	163	7	65	NA
171	Mitsui Engineering & Shipbuilding	JPN	2700	0	91	18	65	16
172	Burmah Castrol*	GBR	4215	1	309	6	65	9
173	Courtaulds	GBR	3511	7	326	-4	65	2
174	Sumitomo Metal Mining	JPN	4079	-6	88	-38	64	1
175	Dainippon Screen Mfg.	JPN	1096	-16	-143	NM	63	NA
176	CRA*	AUS	3848	6	537	1	62	22
177	Ajinomoto	JPN	5519	1	238	33	62	23
178	Grand Metropolitan	GBR	12483	2	960	-32	62	17
179	Amada	JPN	1061	-26	49	-78	62	11
180	Unitika	JPN	2760	-12	34	-72	61	3
181	Bombardier	CAN	3653	45	121	22	60	36
182	T&N*	GBR	2455	2	111	28	60	18
183	SNIA*	ITA	1665	-13	-66	NM	58	-34
184	Valmet*	FIN	2165	26	-49	NM	57	9
185	Hartmann & Braun*	DEU	956	23	20	-11	57	22
186	BBA Group*	GBR	2340	6	84	-4	57	11
187	Steyr-Daimler-Puch*	AUT	1342	-22	2	-89	56	-19
188	CarnaudMetalbox*	FRA	4702	-3	361	10	56	-5
189	Sekisui House*	JPN	9429	4	589	-19	56	-1
190	Gambro*	SWE	1090	12	130	27	54	13
191	Nippon Shinyaku	JPN	406	3	49	-2	53	7
192	Svenska Cellulosa*	SWE	5591	-2	78	-63	53	16
193	EBF*	FRA	2209	2	34	-22	51	0
194	Bertrand Faure*	FRA	1727	3	51	18	51	32
195	Nippon Zeon	JPN	1234	-5	6	-64	50	0
196	Akzo Faser*	DEU	1380	0	81	15	50	-16
197	Hutchinson*	FRA	1517	7	117	-4	50	13
198	Toyama Chemical	JPN	396	-4	24	-25	49	-15
199	Stork*	NLD	2079	2	47	-52	48	-8
200	Broken Hill Proprietary	AUS	11311	10	1341	42	47	1

ALPHABETICAL LIST OF COMPANIES

The number following each company name indicates its rank

51
147
177
196
45
139
6
134
43
131
179
116
m Holding 87
48
64
154
164
25
13
186
30
194
Group 119
181
130
20
155
167

British Aerospace 76
126
British Petroleum 65
58
200
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107
172
105
32
188
113
18
173
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137
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117
1
Dainippon Screen Mfg 175
EBF 193
Essex 79
Elf Aquitaine 34
59
120
55
11
109
129

Ford/Werke 39
Fuji Photo Film 40
66
Fujitsu 5
101
190
General Electric Co 17
151
Glaxo Holdings 24
Grand Metropolitan 178
140
135
185
73
3
141
150
Hoechst 14
19
197
Immuno International 168
Imperial Chemical Industries 44
165
162
152
70
103
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Komatsu 74
89
153
Kubota 69
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Kyocera 98
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111
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Mannesmann 42
Matsushita Electric Industrial 4
Matsushita Electric Works 56
Merck AG 67
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Mitsui Eng. & Ship. 171
Mitsui Petrochemical Inds 94
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NEC 10
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Nikon 144
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Nippon Shinyaku 191
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Nipponsanso 28
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OCE-van der Grinten 148
Oki Electric Industry 63
Olivetti 62
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Omron 78
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Oreal [L'] 61
Outokumpu 146
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Pechiney 97
Pechiney International 159
12
83
Pilkington 149
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Preussag 86
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123
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Rhône-Poulenc 26
Ricoh 54

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Rohm 169
Rolls-Royce 57
Roussel Uclaf 68
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RTZ 143
RWE 8
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Sandoz 27
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Schering 41
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Sharp 36
110
104
128
Siebe 133
2
SKF 157
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158
183
170
60
15
187
199
100

53
Sumitomo Metal Mining 174
Svenska Cellulosa 192
90
182
112
Takeda Chemical Industries 49
Tonen Sekiyaku 96
TDK 84
88
Thomson-CSF 46
Thyssen 93
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124
Toray Industries 71
Toshiba 7
92
198
UCB 156
Unilever 37
180
Valeo 95
184
VEBA 80
16
23
Wellcome 47
72
122

for fiscal 1992; (1) Data includes R&D for customers or government. (2) Includes engineering expenses. AUS = Austria, BEL = Belgium, CAN = Canada, CHE = Switzerland, DEU = Germany, DNK = Denmark, FIN = Finland, = Britain, ITA = Italy, JPN = Japan, NLD = Netherlands, NOR = Norway, NUK = Netherlands/Britain combined, NZL = New Zealand, SWE = Sweden

EDITED BY AMY DUNKIN

Investing

VARIABLE ANNUITIES: MORE CHOICES, MORE FANS

With the rush of assets into variable annuities in the past two years, you would never guess they had been around for more than 40. A combination insurance-and-investment product, variable annuities let investors accumulate assets for retirement tax-deferred, and when they're ready, receive regular payments guaranteed to last a lifetime.

What has caused a record $43 billion to flow into annuities in 1993 and $14 billion in the first quarter of '94 is that insurance companies, mutual funds, and banks finally figured out how to tap their vast potential. They have beefed up investment choices, so annuities no longer play second fiddle to mutual funds in terms of performance. They have also tinkered with the insurance features, fortifying some of the safety nets and relaxing some of the restrictions. And they have discovered how to market them to a public that wants to defer taxes as long as possible, beat inflation by investing in equities, and still enjoy peace of mind in retirement.

Today's variable annuities provide a flexible way to manage a diverse set of assets without incurring tax liabilities. They also offer unique tools for managing investment risk—a benefit that's more important than ever in turbulent markets.

MIXED BAG. The most important feature is investment performance—where the most exciting developments have occurred. Whereas companies used to offer four or five "subaccounts," such as a stock, fixed-income, balanced, and money market fund, contracts now have an average of eight funds, according to Chicago's Morningstar, which rates mutual funds and annuities. An annuity portfolio can include several kinds of stock funds investing in everything from value stocks to small-caps to international equities. Top-selling Franklin Valuemark has just added a global growth fund and a developing-markets stock fund to its 13-fund lineup. Some companies are also offering funds from several managers. American Skandia is the leader in the "multiple manager" approach, with 35 in its Advisors Choice annuity, including T. Rowe Price, Janus, and Scudder.

But some investors find that having so many options only makes variable annuities more confusing. For them, companies have found ways to simplify the process. Among its 13 funds, Equitable's EQUI-VEST offers three asset-allocation funds for people with different risk tolerances. American Skandia supplies investment advisers with tools to design an asset mix for each client and then automatically rebalance the portfolios, so the desired percentages in different funds are maintained.

Annuities have become more diversified in their fixed-interest accounts as well. SunAmerica's Polaris includes five fixed accounts, all with different guaranteed rates of return, depending on how long you plan to participate. One-year fixed accounts currently

an average of
according to
gstar, nearly two
higher than mon-
ket funds and bet-
n the average eq-
nd, which has a
e return of 2.19%
r. But before you
r assets into the
nterest account,
mind that money
l there is mingled
e insurer's gener-
nt. If the compa-
s, creditors could
ir hands on it.
u want to have a fixed
t as part of your in-
nt strategy, contracts
make it easy to com-
ked and equity invest-
any companies have
hat use a fixed account
rantee the principal.
ample, a $100,000 in-
nt in SunAmerica's
al Advantage would in-
65,203 in the fixed ac-
which would be pro-
to grow to $100,000 in
years. The remaining
could be invested ag-
ely in equities. Metro-
Life's Preference
ccount includes au-
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lesigned for even
onservative inves-
/ith Equity Gener-
l the money is put
xed account, with
e earnings swept
growth-stock fund.

D-UP. Innovations
insurance parts of
le annuities can
ary investors feel
secure while dab-
in equities. But
lso may increase
eady hefty insur-
xpenses, which av-
1.26% per contract,
ng to Morningstar,
e typically higher
newer, souped-up
es. "In general, as
ld things to the
t, the fees will go
ys Dave Nadig, a
consultant at Ce-
ssociates in Bos-
you are looking
ax-deferred invest-
vehicle, you don't
o pay for all the
extras. But if you are nearing retirement and worried about losing your nest egg, some recent improvements may intrigue you.

For one, insurance companies have revamped the guaranteed death benefit. This comes into play only if you die before the annuity has started paying out. Traditionally, annuity contracts provide that, in the event of your untimely demise, your beneficiaries receive either the value of the contract or at least the amount you contributed. But many contracts now guarantee that even if the market should crash just before you die, your heirs will receive at least the value of what you put in plus a minimum return of 4% or 5%. Other contracts allow you to lock in the amount the investment has grown every five years or so, a feature known as "stepped up" death benefits. Putnam Capital Manager will soon step up death benefits annually.

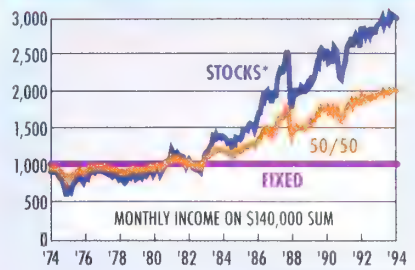
Companies are also making contracts more attractive by easing restrictions on withdrawing money. Usually, you owe a surrender charge of about 6% if you take out money before about seven years. The penalty drops a point each year after that. Now, contracts may allow you to pull out 10% or 15% in a year without incurring surrender charges. Even better, annuities that are sold by no-load fund companies such as Dreyfus, Scudder, and Vanguard do not have any surrender charges. But since annuities are long-term investments (and as the government charges a 10% tax on any gains you withdraw before age 59½), you should not buy one unless you have other liquid assets to tap if need be.

LUMP SUM. Insurance companies have also devised payout options that may interest you if you need your annuity to generate income. For example, Keyport Life's Preferred Income Plan guarantees income through age 100. With this "period certain" annuity, you effectively get payments for life, plus you gain the option of cashing in the annuity for a lump sum of cash at any time. You can also be fairly sure your heirs will get something from the annuity, since if you die before 100, they get the remainder.

A new generation of "immediate" variable annuities has cropped up in the past year, emphasizing how much flexibility there is in the payout stage. They provide for an immediate income stream upon deposit of a large lump sum—at least $25,000 for Fidelity Investments' Income Advantage. They are being marketed to retirees who want to invest in stocks yet be assured of receiving regular payments.

Variable annuities still have plenty of drawbacks. If you do not hold an annuity for more than six years, the fees will probably add up to more than you gain in tax deferral, and you should stick to mutual funds. If you haven't already maximized contributions to your individual retirement account, 401(k), or other qualified plan, you should do that before buying an annuity. But if you decided against buying a variable annuity in the past because you didn't like the investment options available, take a look at today's offerings. You might find just what you are looking for. *Amey Stone*

MORE GAINS WITH EQUITIES



DATA: FIDELITY INVESTMENTS LIFE INSURANCE CO.

SOME GROUNDBREAKING ANNUITIES

Contract	Description
AMERICAN SKANDIA ADVISORS PLAN 800 SKANDIA	"Advisors Choice" allows you to choose among 35 subaccounts managed by different investment firms. It also provides automatic rebalancing of assets when they deviate from the determined formula.
FIDELITY INCOME ADVANTAGE 800 544–2442	Part of a new generation of "immediate annuities" that allow retirees who have already accumulated a nest egg to invest in equities and get a steady stream of income guaranteed for life.
KEYPORT PREFERRED ADVISOR 800 367–3653	The "Preferred Income Plan" guarantees income up to age 100. If you die before then, the value remaining is paid to your heirs. You effectively maintain the promise of lifetime income but have the right to cash in the annuity for a lump sum at any time.
METLIFE PREFERENCE PLUS ACCOUNT 800 MET-LIFE	Automatic investment programs aim to ease people into equities. With the "Equity Generator," all the money is invested in a fixed account, and earnings are swept into a growth-stock fund. With the "Equalizer," money is split between equity and fixed-income accounts and rebalanced each quarter.
PUTNAM CAPITAL MANAGER 800 521–0538	This plan transformed the guaranteed death benefit. If you die before the annuity starts paying out, your heirs receive the current value of the contract or the value at your last anniversary date, whichever is higher.

DATA: BUSINESS WEEK

ERIC HOFFMANN/BW

Pets

WHAT IF FIDO TURNS OUT TO BE A LEMON?

When new cars turn out to be lemons, most buyers wish they could trade them in. The same does not apply to sick puppies. People bond quickly with pets and often opt to nurse them back to health despite huge vet bills. That's on top of paying $200 to $1,000 for a purebred dog.

But you're not stuck. Many states are enacting "pet lemon" laws, similar to those for cars. While the laws require refunds or exchanges, in most cases they also provide for the reimbursement of vet bills. "People get attached to their pets. They don't want their money back," says Mary Randolph, author of *Dog Law* ($12.95, Nolo Press).

So far, 12 states have laws protecting buyers of dogs (and usually cats). "This is a hot issue with animal advocacy groups, and we expect more states to follow suit," says Ken White of the Humane Society of the U. S. The laws are aimed not so much at backyard breeders as at pet shops supplied by puppy mills that mass-breed dogs. The Humane Society estimates puppy mills produce 500,000 dogs a year, many with health problems caused by overbreeding or neglect.

DOGGONE SHAME. The laws require dealers to give customers written notice of their rights and allow them about two weeks for a vet checkup. An unfit dog can be returned for a refund or exchange in Connecticut, Massachu[setts], New Hampshire, or Vir[ginia]. In addition, Arkansas, C[alifor]nia, Florida, Minnesota, [New] Jersey, New York, South[Caro]olina, and Vermont have [simil]ing provisions for coverin[g vet] bills, usually up to the [pet's] cost. In states without [such] laws, Randolph suggest[s get]ting it in writing tha[t the] seller will refund your m[oney] if the animal falls ill.

The odds of taking ho[me a] healthy dog are better i[f you] stick to breeders. For [a list] of those near you, cal[l the] American Kennel Club a[t] 407-PUPS (99¢ a minut[e]. If you buy from a pet s[hop,] check first with your co[n]er-protection agency o[r the] Better Business Bureau [for] past complaints. Pick pu[ppies] that seem friendly, clean[, and] well-fed. (AKC papers e[nsure] only pedigree, not he[alth]. Some signs of illness in[clude] runny nose or eyes, s[neez]ing and dirty ears. But with [a bit] of diligence, you can [bring] home a peach instead [of a] lemon. *Susan Sche[ft]*

Autos

NISSAN MAXES OUT THE MAXIMA

In 1980, Nissan took the engine from its 240Z two-seater and dropped it into a big sedan to create the Maxima. Over the years, the curious crossbreed carved out a niche—a big one, it turned out—as the wolf in sheep's clothing. Here was a car with the performance and handling of a hot rod and the bearing and comfort of a family sedan. Nissan's ads put it exactly right: the four-door sports car.

THE 1995 MAXIMA SE: ZERO TO 60 MPH IN 6.6 SECONDS

For 1995, Nissan has done it again. The fourth-generation Maxima, which went on sale last month, is full of the inspired contradictions that marked the Maxima from the beginning. Consider this: Nissan made the 1995 Maxima both speedier and roomier—while taking $2,400 off the sticker price. Or this: The Maxima's new cast-aluminum V-6 engine boosts performance—and fuel economy.

The biggest surprise is the Maxima's price, which starts at just under $20,000—about $600 below the V-6 Toyota Camry. The $2,400 savings over the 1994 version is a bit of an illusion, since the base 1995 Maxima lacks features that used to be standard, notably a $1,000 four-speed automatic transmission and, oddly, a $12 cigarette lighter. (The socket is still there, now labeled "12 volt DC," presumably for powering cellular phones and the like.) Still, the base GXE model is hardly stripped-down and includes dual air bags, cruise control, power windows and mirrors, and a tilt steering wheel. Antilock brakes are a $995 option.

At the other end of the scale is a new GLE version at under $25,000 with enough luxury appointments to [compete] against such $30,000-plu[s] scale cars as Toyota's L[exus] ES 300 or Nissan's own I[nfi]ti J30. Sumptuous leathe[r] seats and doors, and w[ood] interior trim are standar[d]; are an eight-way adjus[table] power driver's seat and [re]mote-control locking sys[tem].

ARGUABLY STYLISH. The M[axi]ma's styling is bound t[o be] controversial. While hand[some] in profile, from the fron[t] car is a hodgepodge of in[har]monious shapes. Particu[larly] jarring is the placemen[t of] the grille above a pair o[f air] intakes.

Car buffs may say that [Nis]san's tilt toward refineme[nt]—its softer ride and quieter [cab]in—is a move away from [the] high-tech performance of [the] years. Not so. Even the [GLE] model does zero to 60 mp[h in] 6.6 seconds. That's faster [than] any of the big Japanese [sedans] and it will leave such Ar[nold] can performance sedan[s] Ford's Taurus SHO [and] Chrysler's Eagle Vision [TSi] the dust. *Larry Armst[rong]*

Smart Money

IT MAY BE TIME TO TAKE UP ARMs

st when you thought it as safe to jump back nto the housing market, ederal Reserve Board ted up interest rates,)-year fixed mortgages om 7% to almost 9% in ree months. Don't pan- ere are some tempting s in adjustable rate ages (ARMs), which in more varieties than And even at the higher good deals are still to l.

the bulk of real estate- s who want a 30-year mortgage, the next best may be the new 10/1 says Paul Havemann, resident of mortgage- ng service HSH iates. The 10/1's s set for 10 years nost half a point than a 30-year now 8.45%. In the ear, it converts to -year ARM that s prevailing rates ully.

CEILING. The 10/1, ntly at 7.87%, is a fraction below 5-year fixed rate , but you can pay er a period of 30 , so you get the rate without the r payments. And most people move five to seven , chances are that already have sold house before the converts. So far, only big s that keep their loans ffering 10/1s, because the ndary market isn't buy- them yet. But they're ading. They're available ch national lenders as Bank in Pittsburgh, Na- bank Mortgage Corp. in pa, and GMAC Mortgage lkins Park, Pa.

t the other end of the trum are loans that ad- every month, which are just catching on in regions outside the Southwest. Such mortgages are tied to the 11th District's cost-of-funds index (COFI)—the rates that Southwestern banks pay their depositors. These COFI ARMs change much less frequently than Treasury bills. "Even in the early '80s, [COFIs] never went up two points in one year," says Margaret Scott, president of Mortgage Advisory Services in New York. "It's a great mortgage for this market." Typical COFI ARM starting rates are 6¾%, with ceilings of 10.45%. That's lower than many ARMs tied to Treasuries. Right now, you can get a 4.4% teaser rate for four months, says Scott. COFI ARMs can be paid over 15, 20, 30, or 40 years, but they carry some points.

Scott doesn't like one-year ARMs right now because, unless you happen to get a bargain-basement rate, after one year you're most likely to wind up paying almost 8%—when you could have a fixed rate for slightly more. Nevertheless, you can choose an ARM with a fixed rate that adjusts every one, three, or five years, or an ARM that converts to a one-year adjustable after one, three, five, or seven years. The 7/23 changes once and then stays fixed for 23 years but at a slightly higher rate and often a higher cap than that of a 7/1.

Which ARM you choose depends on how long you plan to keep the house. If it's only three years, a 5.5% one-year ARM makes more sense than a 30-year fixed. Even if rates rise the maximum two points a year on a $100,000 loan, you would pay out $25,152 at an average rate of 7.5% after three years, as opposed to $27,681 for an 8.5% 30-year fixed loan.

Despite higher rates, even some run-of-the-mill ARMs are good deals because the market is so competitive. Savings and loans, which don't resell mortgages, are offering "suicidal rates of 3%" for one-year ARMs, says Havemann. Lenders are also trying to lure customers with "bells and whistles" such as preapproved mortgages, accelerated processing, and loans with free insurance on your payment in the event that you lose your job, says David Lereah, chief economist at the Mortgage Bankers Assn.

WORST CASE. You may drool over a 3% one-year ARM, but make sure you can afford the payments if rates go up, Lereah warns. Examine the annual and lifetime caps to see what your worst-case liability would be. Usually adjustables can't rise more than 2 points a year and no more than 6 points over the life of the loan. But some five- and seven-year ARMs have 4% lifetime caps, and the 10/1 ARMs at Nationsbank can jump as much as 5 points in the 11th year.

Also, beware of loans that cap your monthly payments. Even if rates rise, your payments stay fixed, but the extra amount you would have paid on your principal and interest is added to the balance you owe. This is called negative amortization, and since it raises your principal, you can wind up paying a lot more over the life of the loan. But with some careful planning and comparison shopping, you won't have to give up on that dream house yet. *Pam Black*

A SMORGASBORD OF MORTGAGES

Loan	Average rate*	PROS	CONS
1-MONTH ARM	3.61%	Tied to a more stable index than Treasuries	*Most likely to carry negative amortization*
ONE-YEAR ARM	5.44	Low teaser rates; easily converts to fixed	*After a year, rate not much better than fixed*
7-YEAR FIXED, THEN 1-YEAR ARM	7.65	Average consumer sells before loan converts	*Can get hammered after seven years*
7-YEAR FIXED, THEN 23-YEAR FIXED	8.13	Rate changes once after seven years	*Can jump six points when it does adjust*
10-YEAR FIXED, THEN 1-YEAR ARM	7.87	10-year rate half-point below 30-year fixed	*Not all lenders offer them*
15-YEAR FIXED	7.98	You pay off your principal faster	*Larger monthly nut than 30-year*
30-YEAR FIXED	8.45	You know exact payments over the long term	*Doesn't pay if you move within 10 years*

* As of 6/10/94 DATA: HSH ASSOCIATES, BUSINESS WEEK ARM=Adjustable-rate mortgage

GRAPHIC BY ALBERTO MENA/BW

Worth Noting

KING STOCK. As part of une "Own Your Share of erica" campaign, the Na- al Association of Investors is offering a free 20-page pamphlet called *Becoming a Shareowner*. It discusses both the individual approach to buying stocks and the investment-club method. For a copy, call 810 543-0612.

■ **FAST FACTS.** Starting on July 1, a fax service from travel publisher Fielding Worldwide will make available instant guides for 32 U. S. cities. Fielding's Cityfax (800 635-9777) will offer five separate guides per destination: for restaurants, hotels, museums, events, and theater. At $4.95 each, the guides will include "best buy" recommendations, ratings for service providers, and performance schedules.

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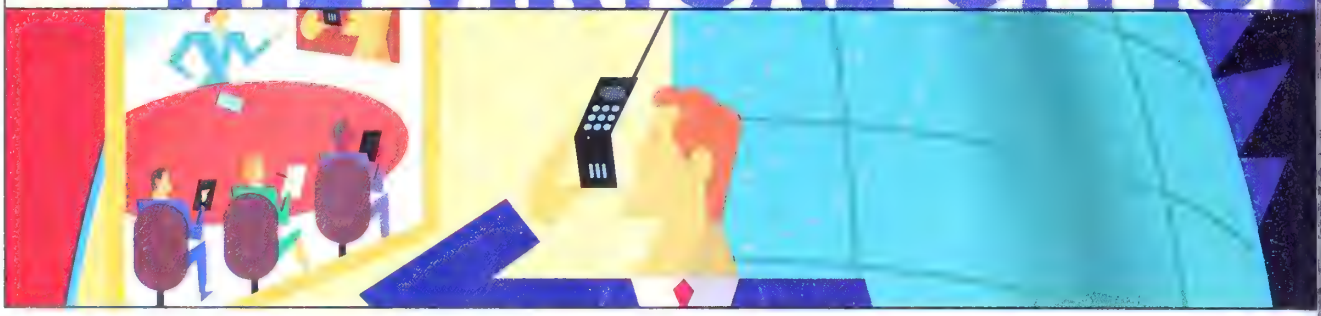

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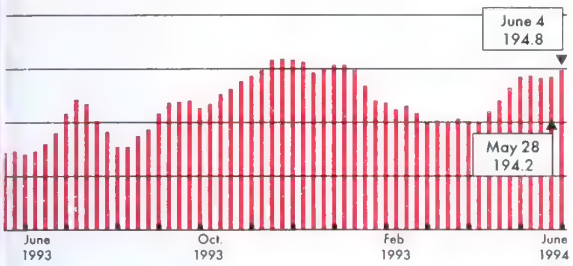
usiness Week Index

DUCTION

from last week: 0.3%
from last year: 4.2%

1967=100 (four-week moving average)

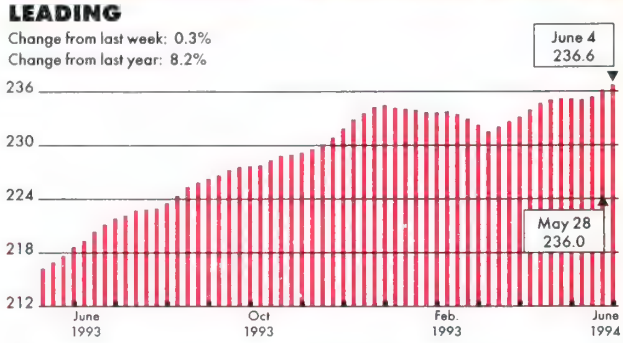


roduction index increased during the week ended June 4, as a later-than-Memorial Day lifted the seasonally adjusted data for the latest week. Output os, trucks, electric power, paperboard, and rail-freight traffic, all rose. Steel, oil refining, coal, paper, and lumber production declined slightly. Before tion of the four-week moving average, the index advanced to 196.6, up from in the previous week.

BW production index copyright 1994 by McGraw-Hill Inc.

LEADING

Change from last week: 0.3%
Change from last year: 8.2%



The leading index rose slightly during the week ended June 4. Higher stock prices, together with faster growth rates for real estate loans and M2 money supply, offset slower growth in materials prices. Materials prices, however, continue to increase at a double-digit pace. Bond yields were virtually unchanged, and data on large-business failures are still unavailable. Before calculation of the four-week moving average, the index rose to 237.6 from 236.4.

Leading index copyright 1994 by Center for International Business Cycle Research

DUCTION INDICATORS

	Latest week	Week ago	% Change year ago
6/11) thous. of metric tons	1,738	1,667#	4.3
(6/11) units	139,673	114,743r#	12.6
S (6/11) units	119,241	97,274r#	17.6
IC POWER (6/11) millions of kilowatt-hours	62,134	57,304#	3.7
-OIL REFINING (6/11) thous. of bbl./day	14,321	14,209#	1.1
6/4) thous. of metric tons	16,994#	18,105	10.5
BOARD (6/4) thous. of metric tons	805.5#	797.4r	7.6
(6/4) thous. of metric tons	735.7#	726.7r	1.5
R (6/4) millions of meters	122.7#	147.7	10.8
REIGHT (6/4) billions of ton-kilometers	30.7#	33.5	9.9

es: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, an Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association rican Railroads

REIGN EXCHANGE

	Latest week	Week ago	Year ago
ESE YEN (6/15)	103	104	108
AN MARK (6/15)	1.63	1.67	1.67
H POUND (6/15)	1.51	1.51	1.51
H FRANC (6/15)	5.58	5.69	5.59
DIAN DOLLAR (6/15)	1.38	1.37	1.28
FRANC (6/15)	1.37	1.41	1.49
AN PESO (6/15)[3]	3.364	3.351	3.111

es: Major New York banks. Currencies expressed in units per U.S. dollar, except for British expressed in dollars

ICES

	Latest week	Week ago	% Change year ago
(6/15) $/troy oz.	384.100	381.450	4.4
SCRAP (6/14) #1 heavy, $/ton	111.50	111.50	0.0
STUFFS (6/14) index, 1967=100	217.0	214.1	7.1
ER (6/11) ¢/lb.	111.0	106.4	25.7
INUM (6/11) ¢/lb.	64.5	64.0	19.9
AT (6/11) #2 hard, $/bu.	3.74	3.62	8.7
ON (6/11) strict low middling 1-1/16 in., ¢/lb.	77.57	79.54	38.6

es: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals* . Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (6/10) S&P 500	458.14	457.98	2.7
CORPORATE BOND YIELD, Aaa (6/10)	7.85%	7.96%	6.4
INDUSTRIAL MATERIALS PRICES (6/10)	101.6	101.3	5.9
BUSINESS FAILURES (6/3)	NA	NA	NA
REAL ESTATE LOANS (6/1) billions	$426.1	$423.4r	4.0
MONEY SUPPLY, M2 (5/30) billions	$3,554.4	$3,561.3r	2.3
INITIAL CLAIMS, UNEMPLOYMENT (5/28) thous.	358	366	3.2

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
CONSUMER PRICE INDEX (May)	147.7	147.4	2.4
PRODUCER PRICE INDEX (May) finished goods	125.2	125.3	–0.4
RETAIL SALES (May) billions	$182.8	$183.2	6.3
REAL GROSS WEEKLY PAY (May)	$259.36	$256.83r	1.2

Sources: BLS, Census Bureau

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (5/30)	$1,143.8	$1,144.2r	6.5
BANKS' BUSINESS LOANS (6/1)	293.8	291.9	5.2
FREE RESERVES (6/8)	837	685r	18.6
NONFINANCIAL COMMERCIAL PAPER (6/1)	155.5	154.1	–2.0

Sources: Federal Reserve (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (6/14)	4.23%	4.03%	3.01%
PRIME (6/15)	7.25	7.25	6.00
COMMERCIAL PAPER 3-MONTH (6/14)	4.54	4.53	3.24
CERTIFICATES OF DEPOSIT 3-MONTH (6/15)	4.43	4.43	3.17
EURODOLLAR 3-MONTH (6/10)	4.44	4.50	3.25

Sources: Federal Reserve, First Boston

data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
astern Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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TREE CITY USA

The National Arbor Day Foundation

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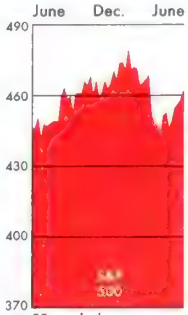
vestment Figures of the Week

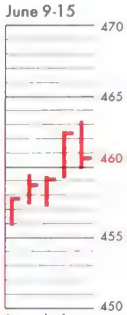
ITARY

ies staged a broad
t especially enthusiastic
The Dow Jones industrial
nded four straight days
y closing on June 14
00, as investors were
y upbeat inflation tid-
d prices rose on that day
ut the news that consum-
rose a mere 0.2% in May
ustain the markets on
Stock prices declined and
y prices rose, as traders
that the Federal Reserve
n boost short-term inter-

STOCKS

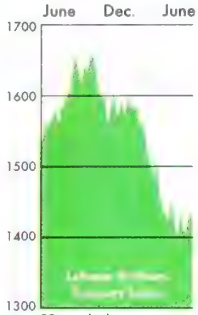


52-week change +2.9%

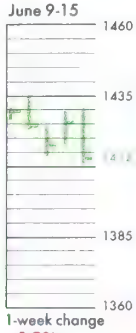


1-week change +0.8%

BONDS

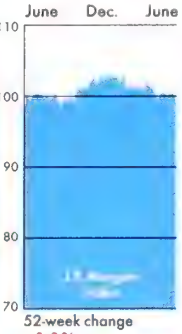


52-week change −7.9%

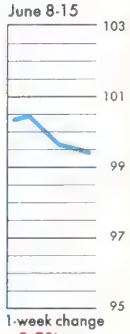


1-week change −1.2%

THE DOLLAR



52-week change +1.1%



1-week change −0.9%

KET ANALYSIS

OCKS	Latest	% change Week	52-week
IES INDUSTRIALS	3790.4	1.1	7.9
COMPANIES (S&P MidCap Index)	171.3	0.2	4.2
MPANIES (Russell 2000)	251.3	0.5	9.2
PANIES (Russell 3000)	265.0	0.6	3.5

N STOCKS	Latest	% change (local currency) Week	52-week
(FINANCIAL TIMES 100)	3045.8	0.3	5.6
NIKKEI INDEX)	21,283.0	0.1	6.9
(TSE COMPOSITE)	4166.3	−0.8	7.0

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.21%	4.21%	3.11%
30-YEAR TREASURY BOND YIELD	7.40%	7.28%	6.81%
S&P 500 DIVIDEND YIELD	2.74%	2.77%	2.80%
S&P 500 PRICE/EARNINGS RATIO	20.4	20.1	22.6

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 200-day moving average	462.0	462.0	Negative
Stocks above 200-day moving average	37.0%	36.0%r	Positive
Speculative sentiment: Put/call ratio	0.48	0.47	Positive
Insider sentiment: Vickers sell/buy ratio	1.09	0.99	Positive

USTRY GROUPS

BLOOMBERG FINANCIAL MARKETS

ONTH LEADERS	% change 1-month	12-month	Strongest stock in group	% change 1-month	12-month	Price
	15.5	21.5	NUCOR	19.3	60.2	70 3/8
GS AND LOANS	12.2	10.7	GREAT WESTERN FINANCIAL	22.1	21.1	19 3/8
INUM	11.0	16.1	ALCAN ALUMINIUM	11.8	25.0	23 3/4
EWARES	9.2	12.5	NEWELL	11.8	32.5	44 7/8
SPORTATION SERVICES	9.1	42.9	PITTSTON SERVICES	12.2	48.3	26 1/2

ONTH LAGGARDS	% change 1-month	12-month	Weakest stock in group	% change 1-month	12-month	Price
LS AND MOTELS	−5.4	19.0	PROMUS	−7.5	17.6	34
REL MANUFACTURING	−3.5	14.3	LIZ CLAIBORNE	−12.0	−32.7	21 1/8
DRINKS	−3.1	−7.4	PEPSICO	−10.6	−13.0	31 3/4
RE TIME	−2.8	28.5	OUTBOARD MARINE	−5.6	12.8	21
ISHINGS AND APPLIANCES	−2.8	13.4	ARMSTRONG WORLD INDUSTRIES	−17.3	50.4	45 7/8

TUAL FUNDS

MORNINGSTAR INC

RS

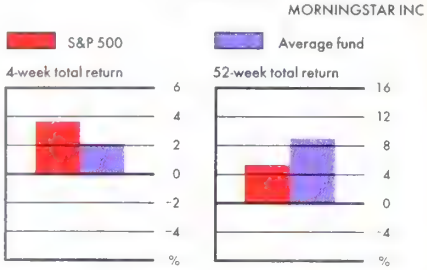
k total return	%
IGTON STRATEGIC INVESTMENTS	9.3
LATIN AMERICA GROWTH A	9.3
N SEAS EMERGING MARKETS	9.0

total return	%
DER LATIN AMERICA	50.6
CO EMERGING MARKETS INSTL.	50.1
RILL LYNCH LATIN AMERICA A	47.1

LAGGARDS

Four-week total return	%
WRIGHT EQUIFUND ITALIAN NATL. FID. EQTY.	−10.0
FIDELITY SELECT SOFTWARE & COMPUTER	−6.2
PAINEWEBBER EUROPE GROWTH B	−6.1

52-week total return	%
MONITREND GOLD	−30.9
STEADMAN OCEANOGRAPHIC TECHNOLOGY	−26.2
EXCEL VALUE	−19.7



ATIVE PORTFOLIOS

DRI/McGRAW-HILL

amounts
ent the present
of $10,000
ed one year ago
portfolio

tages indicate
y total returns

Foreign stocks	U.S. stocks	Gold	Treasury bonds	Money market fund
$12,550	$10,650	$10,429	$10,232	$10,201
+1.84%	+0.91%	+0.87%	−0.41%	+0.04%

on this page are as of market close Wednesday, June 15, 1994, unless otherwise indicated. groups include S&P 500 companies only; performance and share prices are as of market close June 14. Mutual fund returns are as of June 10. Relative portfolios are valued as of June 14. A more detailed explanation of this page is available on request. r = revised

LET THE MARKET REGULATE MICROSOFT

When is a computer operating system like a railroad bridge? Nutty as the question sounds, it appears to be at the heart of the Justice Dept.'s antitrust case against Microsoft. After four years of investigation and a small fortune in taxpayer dollars, the feds appear finally ready to charge Microsoft with monopolistic practices.

Why the railroad-bridge analogy? Because the trustbusters are trying to apply regulations born in the days of railroads to the new digital age. Under Assistant Attorney General for Antitrust Anne K. Bingaman, Justice is arguing that just as a railroad that owned the single bridge over a river had to allow other railroads to use that bridge, so, too, must Microsoft permit all other applications-software writers full access to its dominant operating system. That system, MS-DOS and Windows, may be deemed an "essential facility" by Justice because it is an essential "bridge" to writing new applications programs (page 56).

The trouble with Justice's theory is that Microsoft already gives other software companies broad access to its operating software. But, rivals charge, Microsoft's own applications writers often get earlier access to data, giving them an edge. And Microsoft does acknowledge it reserves a portion of its operating system for itself.

Yet none of this may matter. Even as Microsoft's power reaches its peak, changing markets are eviscerating Justice's case. Today, Microsoft holds about 80% of the operating systems market for desktop PCs. But the industry's center of gravity is quickly shifting to new, high-speed networks.

Microsoft is already battling a different breed of competitor and not doing particularly well. Its new server operating system, Windows NT, has done poorly against Novell's NetWare. Winpad, Microsoft's operating system for PDAs, is still struggling after six years. Time Warner has rebuffed Microsoft on interactive TV, and AT&T turned it down cold for rivals Novell and Lotus for a new business network.

Should Justice proceed with its "essential facilities" argument, it could take years to litigate or settle. By then, its judgment will be moot. Fast-changing technology showed IBM no mercy, even after Justice dropped its antitrust case against it. Technology will have no compassion for Microsoft either, Justice notwithstanding. It's time to drop the case.

THE THREATS TO TRUE HEALTH-CARE REFORM

In its search for a compromise on health-care reform, Congress seems ready to accept what it calls "triggers." The idea is to avoid unpalatable medicine, such as mandates for employers to buy workers' insurance or price controls, in favor of letting health-care markets work. If competition doesn't produce universal coverage and rein in costs, triggers would kick in, extending government's heavy ha

This is a political dodge, of course, but a dodge t makes sense. Triggers would give a reformed health-c market breathing space to build on employers' rec progress in limiting medical inflation. But advocates of n ket-based reform shouldn't celebrate yet. Indeed, Corpo America should watch out for three disturbing possibilit

■ **Cost-shifting.** By not covering its own employees, sm business in effect shifts much of its health bill to big com nies. Doctors and hospitals charge the insured more. L makers eager to court small business may lock in that c shifting by requiring Big Business to buy insurance while empting or heavily subsidizing small companies.

■ **Mangling managed care.** In the name of "patient pro tion," physicians are fighting innovations that curb co The goal: protect incomes by preventing HMOs and insur from dealing with the most efficient doctors and hospita

■ **Patchwork benefits.** Governors are trying to regulate, tion, and tax the health benefits offered by multistate ployers. State-by-state control would rob Big Business the flexibility and clout it needs to rein in costs.

The struggles over mandates, price controls, and taxes cupy center stage in Washington. But Corporate Ame must be alert to what's going on in the wings. Breaks small business, limits on managed care, and state contro health care could create a system that's actually worse t today's morass.

NORTH KOREA: CLINTON MUST NOT BACK DOWN

North Korea is the foreign policy crisis that counts is the line in the sand for the Clinton Administrat Unlike Bosnia, Somalia, or Haiti, a nuclear-arm North Korea is a direct threat to America and Ameri interests around the world. Think for a moment of a gulf in which Saddam Hussein had nuclear weapons. Or a W Trade Center bombing with an atomic device.

Three Administrations have dithered while Pyongy developed missiles and atomic weapons. Belatedly, the ministration has proposed a two-phase plan to have U. N. impose sanctions on North Korea. Mild penalties w be followed by the tough stuff—an oil embargo and Tok blocking of $1 billion in annual remittances.

The Clinton plan has potential. The Administration is rect in taking time to manufacture a coalition with China, pan, and South Korea. But the U. S. must insist on a spe ic timetable for triggering action. North Korea has alre said that it is quitting the International Atomic Ene Agency, which monitors its nuclear development. At a cer point, three or six months, the sanctions must bite.

President Clinton must also go beyond sanctions. He m explain to the American people why the proliferation of clear weapons to anti-American nations and terrorist gro is the single most significant threat against this country's curity in the post-cold-war era. For Clinton, it is time to the hat of Commander-in-Chief.